Grants Opportunities: Science & Tech (98) Dec. 2014 - March 2015

Aeronomy

Granting Agency: National Science Foundation
Current Closing Date: Full Proposals accepted anytime
Expected Number of Awards: N/A
Eligibility: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
Estimated Total Program Funding: N/A
CFDA Number: 47.050
Funding Opportunity Number: PD-98-1521
Paragraph-long description: The Aeronomy program supports research on upper and middle atmosphere phenomena of ionization, recombination, chemical reaction, photo emission, and transport; the transport of energy, and momentum. This program also supports research into mass in the mesosphere-thermosphere-ionosphere system including the processes involved and the coupling of this global system to the stratosphere below and magnetosphere above and the plasma physics of phenomena manifested in the coupled ionosphere-magnetosphere system, including the effects of high-power radio wave modification.About the Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) ProgramThe CEDAR concept originated in the mideighties and was developed over several years through workshops, symposia, and committee deliberations by nearly 100 scientists involved in aeronomical studies. These activities led to a comprehensive report that provided a framework for developing upper atmospheric research in the United States through an evolutionary strategy of instrument development and deployment coordinated with campaign activities related to the global scale, coupled, near earth environment. The program has attracted a large number of graduate students and many international collaborators. Guidance is provided by a science steering committee appointed by the NSF Aeronomy and Upper Atmospheric Facilities program directors; scientific feedback to the community is provided by newsletters and an annual summer workshop.Three broad categories embrace the scientific goals of the CEDAR program: (1) dynamics and energetics of the upper atmosphere, with particular emphasis on the hard to observe region between 80 and 150 km; (2) coupling between the mesosphere, ionosphere, thermosphere, exosphere, and magnetosphere; and (3) horizontal coupling between adjacent geographic regions. CEDAR has provided the community with improved spectrometers, interferometers, and imagers; allowed upgrades of existing facilities; and supported the development of lidars and small radars. Several facilities have been established containing a broad array of state of the art tools to provide a solid infrastructure with which to attack outstanding aeronomy problems well into the future. A report has recently been prepared that summarizes the results from the first five years of CEDAR funding. **For more information, go to:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11686

RESEARCH OPPORTUNITIES IN AERONAUTICS - 2014

Granting Agency: National Aeronautics and Space Administration
Current Closing Date: Detailed Proposals with specific due dates will be accepted through December 31, 2014. Detailed requirements for Proposal Due Dates will be identified in the NRA Tables and Appendices that address individual Thrust Areas.
Expected Number of Awards: N/A
Eligibility: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
Estimated Total Program Funding: N/A
CFDA Number: 43.002
Funding Opportunity Number: NNH14ZEA001N
This publication announces the National Aeronautics and Space Administration (NASA), Headquarters, Aeronautics Research Mission Directorate (ARMD) plans to release the Fiscal Year (FY) 2014 version of the NASA Research Announcement (NRA) entitled, "Research Opportunities in Aeronautics (ROA)", NNH14ZEA001N. Detailed requirements, including Proposal Due Dates will be stated in Appendices that address individual Thrust Areas. Appendices will be posted as Amendments to the ROA NRA and will be published as requirements materialize throughout the year. The FY 2014 ROA NRA (NNH14ZEA001N) can be accessed from the NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) website, (http://nspires.nasaprs.com/), by going first to "Solicitations", and then to "Open Solicitations". Once Amendments are available interested parties can access Open Solicitations, click on NRA NNH14ZEA001N, and then click on "List of Open Program Elements" . Under the FY 2014 ROA NRA ARMD will continue solicitation of foundational and systems-level research proposals for five programs within ARMD: the Airspace Systems Program, the Aviation Safety Program, the Fundamental Aeronautics Program, the Integrated Systems Research Program, and the Aeronautics Strategy and Management Program. The Airspace Systems Program will directly address the Air Traffic Management (ATM) research needs of the Next Generation Air Transportation Systems (NextGen) initiative as defined by the Joint Planning and Development Office (JPDO). The Aviation Safety Program will take a proactive approach to safety challenges with new and current vehicles operating in the Nation's current and future air transportation system. The Fundamental Aeronautics Program will pursue long-term, cutting edge research in all flight regimes to produce data, knowledge, and design tools that will be applicable across a broad range of air vehicles that fly through any atmosphere a t any speed. The Integrated Systems Research Program will conduct research at an integrated system-level on promising concepts and technologies and explore/assess/demonstrate the benefits in a relevant environment. The Aeronautics Strategy and Management Program provides research and programmatic support that benefits each of the other ARMD programs. The program efficiently manages directorate functions including: Innovative Concepts for Aviation, Education and Outreach, and Cross Program Operations. The structure of the ROA NRA will require that proposals be submitted to the most relevant aeronautics program elements, which will be described in Appendices to the NRA. Specific Proposal submission deadline dates, any particular evaluation criteria, and submission points of contact will also be identified in the NRA Appendices. **For more information, go to:** http://nspires.nasaprs.com/external/

PD-14-7222

Granting Agency: National Science Foundation
Current Closing Date: Full Proposals accepted anytime
Expected Number of Awards: 0
Eligibility: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
Estimated Total Program Funding: $0
CFDA Number: 47.049
Funding Opportunity Number: PD-14-7222
DMR's Office of Special Programs im Materials Research (OSP) coordinates and supports crosscutting activities in DMR and in conjunction with NSF-wide programs, including activities that focus on education, broaden participation of underrepresented groups, or engage participants from several disciplines across the division. Many OSP activities are co-funded with other NSF units. OSP activities include Research Experiences for Undergraduates (REU) Sites and Research Experiences for Teachers (RET). The Materials World Network competition is on hiatus for FY 2014; please check back for updates in the summer of 2014. **For more information, go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12803

NSF-NIST Interaction in Basic and Applied Scientific Research in BIO, ENG & MPS

Granting Agency: National Science Foundation
Current Closing Date: Proposals Accepted Anytime
Expected Number of Awards: 20
Eligibility: Only principal investigators (PIs) on current NSF awards from participating divisions in the BIO, ENG or MPS Directorates are eligible to apply for supplements.
Estimated Total Program Funding: $300,000
CFDA Number: 47.041, 47.049, 47.074,
Funding Opportunity Number: 11-066
This Dear Colleague Letter is intended to facilitate interactions between Principal Investigators (PIs), co-PIs, post-doctoral scholars and both undergraduate and graduate students supported by the National Science Foundation (NSF) and scientists and engineers at the National Institute of Standards and Technology's (NIST). NIST operates a vast array of instruments and measurement systems, both commercial equipment and specialized tools developed by NIST researchers. Researchers from industry, academia, and non-profit organizations interested in working collaboratively with NIST researchers on projects of mutual interest may access these systems as part of that research. Supplemental support to existing NSF awards may be requested to allow PIs, co-PIs, post-doctoral scholars and both undergraduate and graduate students on these awards to participate in such collaborative research at NIST. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11066

Developing Country Collaborations in Plant Genome Research (DCC-PGR)

Granting Agency: National Science Foundation
Current Closing Date: Supplemental requests can be submitted at any time. Please allow 4 to 6 months for review. Investigators submitting new or renewal proposals for the FY2006 PGRP (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5338&org=DBI&from=home) and future target dates are encouraged to integrate this activity into the proposals.
Expected Number of Awards: N/A
Eligibility: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
Estimated Total Program Funding: N/A
CFDA Number: 47.074
Funding Opportunity Number: 04-563
This letter is to call your attention to a new activity that will support research collaboration between US scientists and scientists in developing countries as part of ongoing or new Plant Genome Research Program awards. The Developing Country Collaborations in Plant Genome Research (DCC-PGR) is an addendum to the NSF Program Solicitation, NSF 04-510, Plant Genome Research Program (PGRP) (http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf04510). The intent of DCC-PGR awards is to support collaborative research linking US researchers with partners from developing countries to solve problems of mutual interest in agriculture, energy and the environment, while placing US and international researchers at the center of a global network of scientific excellence. The long-term goal of these collaborative research efforts is a greater and sustained engagement with developing countries in plant biotechnology research. In order to realize the full potential of biotechnology for the developing world, the technology must target crops grown locally in the developing countries and the traits that are most relevant to the local farmers and consumers. At the same time, proposals should meet the broad goals of the PGRP described in the current Program Solicitation. Of special interest are those research projects that build on prior PGRP investments and that tackle problems specific to crops grown in the developing world. A request for supplemental funding should be made under an existing PGRP award. Support can also be requested within a proposal for a new or renewal PGRP award. Proposed collaborative activities are encouraged that focus on research problems important to developing countries and that include scientist-to-scientist interactions potentially leading to long-term partnerships among participating laboratories. The exchange of ideas and people should be reciprocal and should be built on equal partnerships among U.S. scientists and scientists of developing nations. Examples of activities to be supported would include, but not be limited to: joint research projects; and long-term (1 year) or short-term (1-3 months) exchange visits that are reciprocal exchanges of investigators and students between the US and developing countries. Collaborations should be developed that bring complementary sets of expertise to bear on problems of importance to the participants from developing countries, and that meet their identified needs. **For more information, go to:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5338&org=NSF

National Facilities

Granting Agency: National Science Foundation
Current Closing Date: Proposals accepted any time
Expected Number of Awards: N/A
Eligibility: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
Estimated Total Program Funding: N/A
CFDA Number: 47.049
Funding Opportunity Number: PD-05-1743
Supports the operation of national user facilities: research facilities with specialized instrumentation available to the scientific research community in general and the materials research community in particular. These facilities provide unique research capabilities that can be located at only a few highly specialized laboratories in the nation. They include facilities and resources for research using high magnetic fields, ultraviolet and x-ray synchrotron radiation, neutron scattering, and nanofabrication.
For more information, go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5359

Lower Atmospheric Observing Facilities

Granting Agency: National Science Foundation
Current Closing Date: Proposals accepted any time
Expected Number of Awards: N/A
Eligibility: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
Estimated Total Program Funding: N/A
CFDA Number: 47.050
Funding Opportunity Number: PD-04-1529
The National Science Foundation (NSF), Division of Atmospheric Sciences (ATM), Lower Atmospheric Observing Facilities (LAOF) Program consists of planning, budgeting, coordination, and oversight of multi-user national facilities that are sponsored by NSF for the geosciences research community. Program Management resides within ATM in the UCAR and Lower Atmospheric Facilities Oversight Section (ULAFOS) which provides a single point for coordination. Geosciences research often requires specialized facilities, instrumentation and field support services to carry out scientific field work that is needed to understand the complex, interdependent geophysical processes, often covering remote areas of the globe. Making platforms and instrumentation available to support scientific experiments depends upon adequate acquisition, operation, maintenance, upgrading and replacement of these facilities. Also these platforms and instruments may collect large and sometimes unique data sets that must be validated, archived and made available to the research community. Likewise both pre- and post-planning for scientific field programs (e.g., experimental design, operational plans, logistical support) in which NSF sponsored facilities are deployed is an important element of the overall program.
For more information, go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12807

Atmospheric Chemistry

Granting Agency: National Science Foundation

Current Closing Date: No specific due date
Expected Number of Awards: N/A
Eligibility: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
Estimated Total Program Funding: N/A
CFDA Number: 47.050
Funding Opportunity Number: PD-98-1524
Supports research to measure and model the concentration and distribution of gases and aerosols in the lower and middle atmosphere. Also supports research on the chemical reactions among atmospheric species; the sources and sinks of important trace gases and aerosols; the aqueous-phase atmospheric chemistry; the transport of gases and aerosols throughout the atmosphere; and the improved methods for measuring the concentrations of trace species and their fluxes into and out of the atmosphere. **For more information, go to:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11692

Physical and Dynamic Meteorology

Granting Agency: National Science Foundation
Current Closing Date: Proposals accepted anytime
Expected Number of Awards: N/A
Eligibility: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
Estimated Total Program Funding: N/A
CFDA Number: 47.050
Funding Opportunity Number: PD-98-1522
Physical and Dynamic Meteorology supports research involving studies of cloud physics; atmospheric electricity; radiation; boundary layer and turbulence; the initiation, growth, and propagation of gravity waves; all aspects of mesoscale meteorological phenomena, including their morphological, thermodynamic, and kinematic structure; development of mesoscale systems and precipitation processes; and transfer of energy between scales. The program also sponsors the development of new techniques and devices for atmospheric measurements. **For more information, go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12728

Magnetospheric Physics

Granting Agency: National Science Foundation
Current Closing Date: Proposals accepted anytime
Expected Number of Awards: N/A
Eligibility: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
Estimated Total Program Funding: N/A
CFDA Number: 47.049
Funding Opportunity Number: PD-98-5750
Supports research on the magnetized plasma envelope of the outer atmosphere, including energization by the solar wind; the origin of geomagnetic storms and substorms; the population by solar and ionospheric sources; the origin of electric fields; the coupling among the

magnetosphere, ionosphere, and atmosphere; and waves and instabilities in the natural plasma. Also supported are ground-based observational programs at high latitudes and laboratory experiments applicable to the geospace environment. Theoretical research programs may include numerical simulations using a variety of MHD, hybrid and particle codes. The analysis of data from all sources, whether ground-based or from spacecraft, is also supported. **For more information, go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11725

High-Risk Research in Anthropology

Granting Agency: National Science Foundation
Current Closing Date: Full Proposal Deadline(s) (due by 5 p.m. proposer's local time): Proposals Accepted Anytime
Expected Number of Awards: 5
Eligibility: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
Estimated Total Program Funding: $125,000
CFDA Number: 47.075
Funding Opportunity Number: 08-523
Anthropological research may be conducted under unusual circumstances, often in distant locations. As a result the ability to conduct potentially important research may hinge on factors that are impossible to assess from a distance and some projects with potentially great payoffs may face difficulties in securing funding. This program gives small awards that provide investigators with the opportunity to assess the feasibility of an anthropological research project. The information gathered may then be used as the basis for preparing a more fully developed research program. Projects which face severe time constraints because of transient phenomena or access to materials may also be considered.Investigators must contact the cognizant NSF Program Director before submitting an HRRA proposal. This will facilitate determining whether the proposed work is appropriate for HRRA support. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf08523

Research Coordination Networks (RCN)

Granting Agency: National Science Foundation
Current Closing Date: Full Proposal Deadline(s) (due by 5 p.m. proposer's local time): Proposals Accepted Anytime
Expected Number of Awards: 25
Eligibility: *Organization Limit: Proposals may only be submitted by the following: -Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities. -Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.
Estimated Total Program Funding: $17,500,000
CFDA Number: 47.041, 47.049, 47.050, 47. 074, 47. 075, 47.076, 47.078, 47.079, 47.080,
Funding Opportunity Number: 13-520

The goal of the RCN program is to advance a field or create new directions in research or education by supporting groups of investigators to communicate and coordinate their research, training and educational activities across disciplinary, organizational, geographic and international boundaries. RCN provides opportunities to foster new collaborations, including international partnerships, and address interdisciplinary topics. Innovative ideas for implementing novel networking strategies, collaborative technologies, and development of community standards for data and meta-data are especially encouraged. RCN awards are not meant to support existing networks; nor are they meant to support the activities of established collaborations. RCN awards do not support primary research. RCN supports the means by which investigators can share information and ideas, coordinate ongoing or planned research activities, foster synthesis and new collaborations, develop community standards, and in other ways advance science and education through communication and sharing of ideas. Proposed networking activities directed to the RCN program should focus on a theme to give coherence to the collaboration, such as a broad research question or particular technologies or approaches. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf13520

Environmental System Science

Granting Agency: Office of Science
Current Closing Date for Applications: 12/02/2014
Expected Number of Awards: 1
Eligibility: All types of applicants are eligible to apply except DOE/NNSA National Laboratories which are not eligible to apply for funding as a prime recipient (lead organization).
Estimated Total Program Funding: $4,000,000
CFDA Number: 81.049 -- Office of Science Financial Assistance Program
Funding Opportunity Number: 81.049 -- Office of Science Financial Assistance Program
The Office of Biological and Environmental Research (BER) of the Office of Science (SC), U.S. Department of Energy (DOE) hereby announces its interest in receiving research applications for environmental system science. The goal of this Funding Opportunity Announcement (FOA) is to improve the representation of terrestrial ecosystems and subsurface processes appropriate for advancing Earth system model capabilities, thereby improving the quality of climate model projections and providing the scientific foundation needed to inform DOE?s energy decisions. The FOA will consider applications that focus on measurements, experiments, modeling or synthesis to provide improved quantitative and predictive understanding of terrestrial ecosystems that, in turn, influence atmospheric greenhouse gas concentrations and thereby affect the greenhouse gas forcing of climate. The emphasis of this FOA is to understand non-managed terrestrial ecosystems in the cont ext of a changing climate. Applicants should pose their research applications in the context of representing terrestrial ecosystem and/or subsurface processes appropriate for improving the predictability of climate based on Earth system models. **For more information, go to:** https://www.fedconnect.net/

Geophysics

Granting Agency: National Science Foundation
Current Closing Date for Applications: 12/03/14
Expected Number of Awards: 80

Eligibility: Unrestricted
Estimated Total Program Funding: $15,900,000
CFDA Number: 47.050 -- Geosciences
Funding Opportunity Number: 12-598
The Geophysics Program supports basic research in the physics of the solid earth to explore its composition, structure, and processes from the Earth's surface to it's deepest interior. Laboratory, field, theoretical, and computational studies are supported. Topics include seismicity, seismic wave propagation, and the nature and occurrence of geophysical hazards; the Earth's magnetic, gravity, and electrical fields; the Earth's thermal structure; and geodynamics. Supported research also includes geophysical studies of active deformation, including geodesy, and theoretical and experimental studies of the properties and behavior of Earth materials. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12598

Natural Hazards Engineering Research Infrastructure 2015 – 2019

Granting Agency: National Science Foundation
Current Closing Date for Applications: Dec 3, 2014 Letter of Intent Due Date(s) (required): November 06, 2014 Full Proposal Deadline(s): December 03, 2014
Expected Number of Awards: 10
Eligibility: Who May Submit Proposals: Proposals may only be submitted by the following: - Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions. *Who May Serve as PI: The PI must be a full-time employee of the lead institution by the start date of the NSF cooperative agreement award.
Estimated Total Program Funding: $62,000,000
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: Natural Hazards Engineering Research Infrastructure 2015 - 2019
This solicitation will establish operations of the Natural Hazards Engineering Research Infrastructure (NHERI) for 2015 - 2019. NHERI is the next generation of National Science Foundation (NSF) support for a natural hazards engineering research large facility, replacing the George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES). NEES was established by NSF as a distributed, multi-user, national research infrastructure for earthquake engineering through a facility construction phase during 2000 - 2004, followed by operations of this infrastructure to support research, innovation, and education activities from October 2004 through September 2014. During 2015 - 2019, NHERI will be a distributed, multi-user, national facility to provide the natural hazards engineering community with access to research infrastructure (earthquake and wind engineering experimental facilities, cyber infrastructure, computational modeling and simulation tools, and research data), coupled with education and community outreach activities. NHERI will enable research and educational advances that can contribute knowledge and innovation for the nation's civil infrastructure and communities to prevent natural hazard events from becoming societal disasters. NHERI will consist of the following components, established through up to ten individual awards: Network Coordination

Office (one award), Cyber infrastructure (one award), Computational Modeling and Simulation Center (one award), and Experimental Facilities for earthquake engineering and wind engineering research (up to seven awards, including one award for a Post-Disaster, Rapid Response Research Facility). Up to ten cooperative agreements are anticipated to commence in 2015, each with a five-year award duration. Awardees will not conduct research under their awards. The primary research enabled by NHERI will be conducted by investigators supported through separate NSF awards. The Awardees and the natural hazards engineering community will work together, through Governance and Awardee activities, to establish a shared vision for NHERI, set natural hazards engineering research and education agendas and priorities, and make NHERI a value-added and productive research infrastructure. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14605

Interdisciplinary Research in Hazards and Disasters

Granting Agency: National Science Foundation
Current Closing Date for Applications: Dec 3, 2014
Expected Number of Awards: 20
Eligibility: Who May Serve as PI: Because this program is meant to support interdisciplinary research, the proposal team must include at least three investigators: the Principal Investigator (PI) and two or more co-Investigators (co-PIs) from the lead or participating institutions who are eligible to serve as PI or co-PI on NSF proposals submitted through their respective institutions. Additional PIs or senior personnel may be added as needed. The appropriateness of the research team’s disciplinary composition and expertise will be factors in the merit review of the proposals (see Additional Review Criteria section).
Estimated Total Program Funding: $20,000,000
CFDA Number: 47.041 -- Engineering Grants
47.049 -- Mathematical and Physical Sciences
47.050 -- Geosciences
47.070 -- Computer and Information Science and Engineering
47.075 -- Social, Behavioral, and Economic Sciences
47.079 -- Office of International and Integrative Activities
Funding Opportunity Number: 14-581
Hazards SEES is a program involving multiple NSF Directorates and Offices (CISE, ENG, GEO, MPS, OIIA, and SBE) that seeks to: (1) advance understanding of the fundamental processes associated with specific natural hazards and technological hazards linked to natural phenomena, and their interactions; (2) better understand the causes, interdependences, impacts, and cumulative effects of these hazards on individuals, the natural and built environment, and society as a whole; and (3) improve capabilities for forecasting or predicting hazards, mitigating their effects, and enhancing the capacity to respond to and recover from resultant disasters. The overarching goal of Hazards SEES is to catalyze well-integrated interdisciplinary research efforts in hazards-related science and engineering in order to reduce the impact of hazards, enhance the safety of society, and contribute to sustainability.Hazards SEES seeks research projects that will productively cross the boundaries of the atmospheric and geospace, earth, and ocean sciences; computer and information science (including cyberinfrastructure); engineering; mathematics and

statistics; and social, economic, and behavioral sciences. Successful proposals will integrate across multiple disciplines to promote research that advances new paradigms that contribute to creating a society resilient to hazards. Hazards SEES intends to transform hazards and disaster research by fostering the development of interdisciplinary research that allows for appropriately targeted data collection, integration, and management; modeling (including predictive models for real-time decision making); visualization and simulation; data analytics and data-driven discovery; real-time sensing; cross-cutting knowledge development; and synthesis of applicable models and theory. Proposals must demonstrate the inclusion of the appropriate expertise to address the research questions, hypotheses, and problems being posed. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14581

Mathematical Sciences Infrastructure Program

Granting Agency: National Science Foundation
Current Closing Date for Applications: Dec 3, 2014 Full Proposal Accepted Anytime for proposals that do not deal with training Full Proposal Target Date: December 03, 2014 for proposals that deal with training as described in the Synopsis
Expected Number of Awards:
Eligibility: Unrestricted
Estimated Total Program Funding:
CFDA Number: 47.049 -- Mathematical and Physical Sciences
Funding Opportunity Number: PD-04-1260
The Infrastructure Program provides support for activities that differ from the research projects supported by the disciplinary programs of the Division of Mathematical Sciences. These include working research sessions, such as conferences, symposia, colloquia, and special years, as well as training programs, such as grants for broadening education in the mathematical sciences or increasing the number of individuals in disciplines that are based in the mathematical sciences.
For more information, go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12756

R40 Maternal and Child Health Research Program (SDAS)

Granting Agency: Health Resources & Services Administration
Current Closing Date for Applications: Dec 5, 2014
Expected Number of Awards: 10
Eligibility: As cited in 42 CFR Part 51a.3(b), only public or nonprofit institutions of higher learning and public or private nonprofit agencies engaged in research or in programs relating to maternal and child health and/or services for children with special health care needs are eligible. Faith-based and community-based organizations, Tribes, and tribal organizations are eligibile to apply, if they otherwise meet these eligibility criteria.
Estimated Total Program Funding: $1,000,000
CFDA Number: 93.110 -- Maternal and Child Health Federal Consolidated Programs
Funding Opportunity Number: HRSA-15-077

The R40 MCH SDAS program supports applied research relating to maternal and child health services that utilizes exclusively the secondary analysis of existing national databases and/or administrative records. These projects should have the potential to improve health services and delivery of care for maternal and child health populations. Findings from the research supported by the MCH Research Program are expected to strengthen and expand Affordable Care Act (ACA) implementation. This includes research that drives policy and service delivery of preventive and early intervention services for application in health care delivery programs or develops new knowledge on the impact of insurance coverage on health promotion. **For more information,** Contact Hae Young Park at (301)-44-3-21 Ext. 27 or email hpark@hrsa.gov

Theory Institute in Atomic, Molecular and Optical Physics

Granting Agency: National Science Foundation
Current Closing Date for Applications: Dec 8, 2015
Expected Number of Awards: 1
Eligibility: Proposals may only be submitted by the following: -Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.
Estimated Total Program Funding: $5,000,000
CFDA Number: 47.049 -- Mathematical and Physical Sciences
Funding Opportunity Number: 14-570
The Theory Institute in Atomic, Molecular and Optical (AMO) Physics will be a center to advance theoretical AMO physics and lead in motivating and explaining new experimental work in AMO and other areas of science. The goal of this institute is to foster cutting edge research, serve as a focus for theoretical AMO science, and to enhance the visibility of the field. It will bring together diverse groups both inside and outside of the AMO community to promote connections leading to frontier science, while fostering a vibrant environment at all levels from student to senior investigator. Funding for the institute is designed to foster major breakthroughs at the intellectual frontier of AMO physics by providing resources beyond those available to individual investigators or small groups, in an environment in which the collective efforts of the larger group can be shown to be seminal to promoting significant progress in the science and the education of students. Although interdisciplinary aspects may be included, the bulk of the effort must fall within theoretical atomic, molecular, and optical physics within the purview of the Division of Physics. The successful institute will demonstrate: (1) the potential to advance AMO science; (2) creative, substantive activities aimed at enhancing education, diversity, and public outreach; (3) potential for broader impacts, e.g., impacts on other field(s) and benefits to society; and (4) a synergy or value-added rationale that justifies a center- or institute-like approach.
For more information, **go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14570

Ocean Sciences Postdoctoral Research Fellowships

Granting Agency: National Science Foundation
Current Closing Date for Applications: Dec 8, 2014 Full Proposal Target Date(s): December 08, 2014 Second Monday in December, Annually Thereafter
Expected Number of Awards: 17
Eligibility: Proposals may only be submitted by the following: - Only individuals may apply. OCE Postdoctoral Research Fellowships are awards to individuals; proposals must be submitted directly by the fellowship candidate to NSF. The proposal must include a letter(s) from the sponsoring scientist(s) and a letter(s) from the host organization(s). Fellowship activities may be conducted at any appropriate U.S. or foreign host organization, including colleges and universities, private nonprofit research institutes and museums, and government agencies. *Who May Serve as PI: To be eligible to submit a proposal to the OCE-PRF Program, an individual must, as of the full proposal target date, meet all of the following criteria: <ul> Be a U.S. citizen, national, or permanent resident (i.e., have a "green card"); Have earned the doctoral degree, or expect to have earned the doctoral degree prior to the required start date of the fellowship; Not have worked for more than a total of 24 full-time-equivalent months in positions that require the doctoral degree. If more than 24 months have elapsed between conferral of the doctoral degree and the OCE-PRF proposal target date, the candidate must include specific language in their Biographical Sketch (discussed below) affirming that they meet this eligibility requirement; Present a project plan that falls within the purview of NSF's Division of Ocean Sciences oceanographic research priorities; and Not have submitted concurrently the same project to another postdoctoral program. Proposals that fail to meet the above eligibility requirements will be returned without review.
Estimated Total Program Funding: $3,098,000
CFDA Number: 47.050 -- Geosciences
Funding Opportunity Number: 14-607
The Division of Ocean Sciences (OCE) offers postdoctoral research fellowships to provide opportunities for scientists early in their careers to work within and across traditional disciplinary lines, develop partnerships, and avail themselves of unique resources, sites and facilities. The fellowship program is intended to recognize beginning investigators of significant potential, and provide them with experience that will establish them in positions of leadership in the scientific community. During tenure, fellows will affiliate with an appropriate research institution(s) and conduct research on topics supported by OCE. The OCE fellowship program has two tracks: 1) Track 1 (Broadening Participation) and 2) Track 2 (International). Fellowships are awards to individuals, not organizations, and are administered by the fellows. **For more information**, **go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14607

Computational and Data-Enabled Science and Engineering in Mathematical and Statistical Sciences

Granting Agency: National Science Foundation
Current Closing Date for Applications: Dec 9, 2014 Submission Window Date(s) (due by 5 p.m. proposer's local time): January 09, 2012 - January 23, 2012 November 25, 2012 - December 10, 2012 November 25 - December 9, Annually Thereafter
Expected Number of Awards:
Eligibility: Unrestricted
Estimated Total Program Funding: $5,000,000
CFDA Number: 47.049 -- Mathematical and Physical Sciences
47.080 -- Office of Cyberinfrastructure
Funding Opportunity Number: PD-11-8069
Growing out of scientific computation and the explosion in production of digital and observational data, Computational and Data-Enabled Science and Engineering (CDS&E, http://www.nsf.gov/mps/cds-e/) is clearly emerging as a distinct intellectual and technological discipline lying at the interface of mathematics, statistics, computational science, core sciences and engineering disciplines. CDS&E, broadly interpreted, now affects virtually every area of science and technology, revolutionizing the way science and engineering are done. The Division of Mathematical Sciences and the Office of Cyberinfrastructure of the National Science Foundation recognize the importance of research in CDS&E and envision that the mathematical and statistical research communities will play a leading role in the future development of this emerging science. In partnership with the Office of Cyberinfrastructure, the CDS&E program in DMS supports fundamental research at the core of this emerging discipline. It supports broadly innovative, ambitious and transformative research that will lead to significant advancement in CDS&E. The emphasis will be on mathematical, statistical, computational, and algorithmic developments, as well as their applications in advancing modern cyberinfrastructure and scientific discovery. Multidisciplinary collaboration and the training of the next generation data and computational scientists firmly grounded and trained in mathematics and statistics will be strongly encouraged. The research topics supported by CDS&E -MSS will be rooted in mathematics and statistics and will address computational and big data challenges and promote directly discoveries and innovations at the frontiers of science and engineering. The overall impact in the mathematical and statistical sciences of the proposed work will be a review criterion.Examples in which mathematical and statistical research enables advances in CDS&E include, but are not limited to:• Sophisticated computational/statistical modeling for simulation, prediction, and assessment in large scale and data intensive scientific problems that incorporate high performance and/or distributed computing that includes addressing challenges of scalability and heterogeneous architectures• State-of-the-art tools and theory in statistical inference, statistical learning and data mining for knowledge discovery from massive, complex, and dynamic data sets; or novel usage of knowledge in science to understand effective ways to exploit massive and quickly growing data• General theory and algorithms for advancing large-scale modeling for complex problems such as those with strong heterogeneities and anisotropies, multi physics coupling, multiscale behavior, stochastic forcing, uncertain parameters or dynamic data, and the subtle impact on a calculation of long-time integration• Sophisticated computational methods for the elucidation of topological theory, revealing and examining structures in algebraic and arithmetic geometry and number theory, and design of cryptographic security and cybersecured systems• Innovative methodologies and theory for large scale data acquisition through optimal designs, complex computer experiments, and compressed sampling.•

Study of mathematical, statistical and stochastic properties of complex networks arising from computational science, all other core sciences, and engineering disciplines that are supported by NSF• Computational differential geometry for graphics and visualization, signal processing, analysis and compressed sensing.• Advances in discretization methods and solvers, optimization, validation and uncertainty quantification, and automated and reproducible science through rigorous problem specification and code generation **For more information**, **go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504687

SBIR/STTR 2015 Phase II Release 1

Granting Agency: Office of Science
Current Closing Date for Applications: Dec 9, 2014
Expected Number of Awards:
Eligibility: Please see the full FOA document for complete details. Other Eligibility Information: The research or R&D must be performed in the United States. ?United States" means the 50 states, the territories and possessions of the United States, the Commonwealth of Puerto Rico, the Trust Territory of the Pacific Islands, and the District of Columbia. Non-U.S. citizens are eligible to perform work on SBIR/STTR projects provided he/she is legally empowered to work in the U.S. at the time that an award is made.
Estimated Total Program Funding:
CFDA Number: 81.049 -- Office of Science Financial Assistance Program
Funding Opportunity Number: DE-FOA-0001193
The Department of Energy (DOE) invites eligible Phase I and Phase II grantees to apply for Phase II grants (both initial and sequential) under the Funding Opportunity Announcement (FOA). Please see the full FOA document for complete details. The full text of the Funding Opportunity Announcement (FOA) is located on FedConnect. Instructions for completing the Grant Application Package are contained in the full text of the FOA which can be obtained at: https://www.fedconnect.net/FedConnect/?doc=DE-FOA-0001193&agency=DOE. **For more information**, **go to:** https://www.fedconnect.net/

Consortium on Biomarker and Outcome Measures of Social Impairment for Use in Clinical Trials in Autism Spectrum Disorder (U19)

Granting Agency: National Institute of Health
Current Closing Date for Applications: Dec 10, 2014
Expected Number of Awards: 1
Eligibility: Public housing authorities/Indian housing authorities, Private institutions of higher education, Native American tribal governments (Federally recognized), Small businesses, Independent school districts, Native American tribal organizations (other than Federally recognized tribal governments), Nonprofits that do not have a 501(c)(3) status with the IRS, other than institutions of higher education, Public and State controlled institutions of higher

education, Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education, For profit organizations other than small businesses
Estimated Total Program Funding: $3,525,000
CFDA Number: 93.242 -- Mental Health Research Grants
93.865 -- Child Health and Human Development Extramural Research
Funding Opportunity Number: RFA-MH-15-800
The purpose of this Funding Opportunity Announcement (FOA) is to invite applications for the Consortium on Biomarkers and Outcome Measures of Social Impairment in Autism Spectrum Disorder (ASD) in order to generate objective tools for use in clinical trials of behavioral or pharmacologic interventions. The FOA will support a Consortium project to conduct a multi-site study to assess a well-justified set of standardized lab-based measures of domains of social impairment and biological measures (resting state and task-based EEG as well as eye tracking measures) that show promise in school age individuals with ASD at baseline, 6 and 24 week time points. The intent of the FOA is to qualify a set of measures that can be used as stratification biomarkers and/or as sensitive and reliable objective measures of social impairment in ASD clinical trials. A key goal of the Consortium projectis to provide a community resource for broad sharing of all data generated including processed/analyzed data, with rapid and timely deposition of data into the National Database for Autism Research (NDAR). All data generated in this project are expected to be deposited in NDAR and will be accessible for use by all qualified investigators. In addition, blood (DNA) samples are expected to be deposited in the NIMH Repository and Genomics Resource for future research use. The Consortium project will assess the following: (1) whether lab-based measures of specific domains of social impairment in ASD are more sensitive indicators of clinical status compared to commonly used clinician and caregiver assessments of social impairment for their potential use as outcome measures in clinical trials; (2) whether eye-tracking, electrophysiological (EEG) paradigms, or a combination of the two, have potential utility as stratification biomarkers and/or as sensitive and reliable measures of change in ASD clinical trials; (3) the relationship (correlation) of lab-based measures of domains of social impairment to eye tracking or EEG (resting state and task-based) paradigms; and (4) the relationship (correlation) of lab-based measures of domains of social impairment to commonly used clinician and caregiver assessments of social impairment. In addition, the FOA includes a resource aim for the collection of blood (DNA) samples from all subjects, including the parents of ASD subjects, for future genomic analyses. **For more information**, **go to:** http://grants.nih.gov/grants/guide/rfa-files/RFA-MH-15-800.html

Strategic Technologies for CyberInfrastructure

Granting Agency: National Science Foundation
Current Closing Date for Applications: Dec 15, 2014 Opportunity expiration date is December 15, 2014.
Expected Number of Awards: 7
Eligibility: Unrestricted
Estimated Total Program Funding: $1,500,000
CFDA Number: 47.080 -- Office of Cyberinfrastructure
Funding Opportunity Number: PD-11-7684

The goal of the NSF Cyberinfrastructure Framework for the 21st Century (CIF21) initiative is to foster the development of a scalable, comprehensive, secure and sustainable cyberinfrastructure that supports potentially transformative research in science and engineering. The development of a mature cyberinfrastructure relies on the evaluation of the potential for new technologies to catalyze transformative research and on an understanding of the strategic role of new technologies in cyberinfrastructure.The primary goal of the Strategic Technologies for Cyberinfrastructure (STCI) Program is to support activities based on experimental/innovative hardware or software systems or other unique cyberinfrastructure activities that enable leading edge scientific and engineering research and education with broader impact realized across our entire society. These systems or activities should not be appropriate for funding by any other current programs or solicitations, and should be able to demonstrate the potential to evolve into innovative, scalable, highly useful and usable cyberinfrastructure as part of CIF21.Experimental systems may include hardware and software in the areas of high performance computing, large scale data intensive computing/visualization/analytics and innovative networking.Eligible projects and unique activities include acquisition, development, deployment, sustaining, research, and educational activities necessary to create or enhance current cyberinfrastructure and positively impact science and education. Projects that include academic-industrial partnerships that address the goals must be discussed with the program officers before submission.Eligible projects and unique activities should address a clearly identified and described cyberinfrastructure need, explain and support the potential for transformative impacts on science or engineering research, research training, education or broader impacts, and provide a convincing explanation of why the project is not suitable for other NSF programs or solicitations.Where appropriate, proposals should explicitly address end user involvement, issues of sustainability, self-management, energy efficiency, and data management. Proposals related to software or facilities (broadly construed) should address production development, deployment, and continuing support by including a project management plan and testing approaches. Before developing a proposal intended for this program, investigators are strongly encouraged to discuss their ideas with program officers associated with the program to make sure that there is no other more appropriate venue for the proposal.Proposals for workshops, symposia, and EArly-concept Grants for Exploratory Research (EAGER) clearly related to the goals and scope of the Program described above may be submitted after discussion with relevant program officers. For general information about how to submit such proposals, please see the Grant Proposal Guide (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg).A group with a proposal that has been declined may not resubmit a new proposal on the same topic without substantial revision. Proposals violating this restriction will be returned to the PI without review.
For more information, **go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503475

NOVEL IN SITU IMAGING AND MEASUREMENT TECHNOLOGIES FOR BIOLOGICAL SYSTEMS SCIENCE

Granting Agency: Office of Science
Current Closing Date for Applications: Dec 18, 2014
Expected Number of Awards: 5

Eligibility: Eligible applicants include public and private entities, including an Indian tribe or tribal organization (as those terms are defined at 25 U.S.C. 450b), faith-based organizations, and community-based organizations. The law limits the site of eligible organizations to the 50 States and the District of Columbia. Although Tribes and tribal organizations may apply, they must meet all applicable requirements, including targeting all CYSHCN across the State for services.
Estimated Total Program Funding: $5,000,000
CFDA Number: 81.049 -- Office of Science Financial Assistance Program
Funding Opportunity Number: DE-FOA-0001192
The Office of Biological and Environmental Research (BER) of the Office of Science (SC), U.S. Department of Energy (DOE) hereby announces its interest in receiving research applications for novel imaging and measurement technologies for biological systems science. This Funding Opportunity Announcement (FOA) will consider applications for the development of novel imaging instrumentation and measurement technologies that support the integrative analysis of communication among subcellular compartments, between individual microbial cells and within multicellular communities/plant tissues. The goal is to develop in situ, dynamic and nondestructive approaches to enable multifunctional imaging, quantitative flux measurements, and multiscale integrative analysis of bioenergy-relevant plant and microbial systems. Ideally, these imaging approaches will pave the way for predictive understanding of the spatial and temporal relationships, physical connections, and chemical exchanges that facilitate the flow of materials and information across membranes and between intracellular sp aces. The anticipated outcome of this FOA is the development of in situ imaging and measurement technologies that can (1) resolve multiple key metabolic processes over time within or among cells and (2) bridge the critical gap in linking molecular-scale information to whole-cell, systems-level understanding. **For more information**, **go to:** https://www.fedconnect.net/

ASTROPHYSICS EXPLORER MISSION OF OPPORTUNITY SOLICITATION AS SALMON-2 AO AMENDMENT

Granting Agency: NASA Headquarters
Current Closing Date for Applications: Dec 18, 2014 Notice of Intent to Propose Due: October 15, 2014
Expected Number of Awards:
Eligibility: Unrestricted
Estimated Total Program Funding:
CFDA Number: NNH12ZDA006O-APEXMO2
Funding Opportunity Number: NNH12ZDA006O-APEXMO2
The National Aeronautics and Space Administration (NASA) Science Mission Directorate (SMD) is releasing an Astrophysics Explorer 2014 Mission of Opportunity (MO) Program Element Appendix (PEA) (NNH12ZDA006O-APEXMO2) as Amendment 9 to the NASA Second Stand Alone Missions of Opportunity Notice (SALMON-2) Announcement of Opportunity (NNH12ZDA006O). The Astrophysics Explorers Program conducts Principal Investigator (PI)-led space science investigations relevant to SMD's astrophysics programs. Astrophysics Explorer investigations must address NASA's strategic objective to discover how

the universe works, explore how it began and evolved, and search for life on planets around other stars. This solicitation will be open from September 17, 2014, through December 18, 2014. Upon the release date, the full text of the PEA will be available electronically at http://nspires.nasaprs.com/ . A preproposal conference will be held in early October; see http://explorers.larc.nasa.gov/APSMEX for details. NASA will release simultaneously the Astrophysics Explorer 2014 Small Explorer Announcement of Opportunity (NNH14ZDA013O) and a solicitation for Astrophysics Explorer U.S. Participating Investigators (APEX USPI) through the Research Opportunities in Space and Earth Sciences 2014 (ROSES-14) NASA Research Announcement (NNH14ZDA001N). Participation is open to all categories of organizations or institutions, U.S. or non-U.S., including educational, industrial, and not-for-profit institutions, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), NASA Centers, the Jet Propulsion Laboratory (JPL), and other Government agencies. NASA expects to select one or two Astrophysics Explorer Missions of Opportunity to proceed into Phase B and subsequent mission phases. If multiple selectable missions are proposed with combined costs within the available funding, NASA may select more than one proposed investigation. This PEA incorporates a number of changes relative to the previous Explorers Mission of Opportunity SALMON-2 PEA and to the Draft 2014 Astrophysics Explorer Mission of Opportunity PEA. All proposers must read the SALMON-2 AO and this PEA carefully, and all proposals must comply with the requirements, constraints, and guidelines contained within the SALMON-2 AO and this PEA. Comments and questions may be addressed in writing or by E-mail to: Dr. Wilton T. Sanders, Astrophysics Explorers Program Scientist, Astrophysics Division, Science Mission Directorate, NASA Headquarters, Washington, DC 20546-0001; E-mail: wilton.t.sanders@nasa.gov (subject line to read "Explorer MO PEA"); Phone: 202-358-1319; FAX: 202-358-3062. Responses to all inquiries will be answered by E-mail and also posted to the Frequently Asked Questions (FAQ) location of the Explorer Program Acquisition website at http://explorers.larc.nasa.gov/APSMEX/ ; anonymity of persons/institutions who submit questions will be preserved. This notice constitutes a NASA Research Announcement as contemplated in FAR 6.102(d)(2). **For more information**, **go to:** http://nspires.nasaprs.com/

Strategic Technologies for CyberInfrastructure

Granting Agency: National Institutes Science
Current Closing Date for Applications: Jan 1, 2015
Expected Number of Awards: 10
Eligibility: As cited in 42 CFR Part 51a.3(b), only public or nonprofit institutions of higher learning and public or private nonprofit agencies engaged in research or in programs relating to maternal and child health and/or services for children with special health care needs are eligible. Faith-based and community-based organizations, Tribes, and tribal organizations are eligibile to apply, if they otherwise meet these eligibility criteria.
Estimated Total Program Funding: $1,000,000
CFDA Number: 93.110 -- Maternal and Child Health Federal Consolidated Programs
Funding Opportunity Number: HRSA-15-077

The R40 MCH SDAS program supports applied research relating to maternal and child health services that utilizes exclusively the secondary analysis of existing national databases and/or administrative records. These projects should have the potential to improve health services and delivery of care for maternal and child health populations. Findings from the research supported by the MCH Research Program are expected to strengthen and expand Affordable Care Act (ACA) implementation. This includes research that drives policy and service delivery of preventive and early intervention services for application in health care delivery programs or develops new knowledge on the impact of insurance coverage on health promotion. **For more information,** Contact Hae Young Park at (301)-44-3-21 Ext. 27 or email hpark@hrsa.gov

Partnerships for Research and Education in Materials

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 7 2015
Estimated Total Program Funding: $3,000,000
Eligibility: Who May Submit Proposals: Proposals may only be submitted by the following: - The proposal must be submitted by a minority-serving college or university. See 'EligibleAcademic Institutions' in this program solicitation for a complete description. Institutions awarded a PREM in 2012 are not eligible. *Who May Serve as PI: The Principal Investigator must hold a faculty appointment at an eligible college or university as defined in the 'EligibleAcademic Institutions' section. A co-PI must be identified at the DMR-supported center and/or facility. PIs are strongly encouraged to use subawards instead ofseparately submitted collaborativeproposals.
CFDA Number: 47.049 – Mathematical and Physical Sciences
Funding Opportunity Number: 14-606
The objective of PREM is to broaden participation and enhance diversity in materials research and education by stimulating the development of formal, long-term, multi-investigator, collaborative research and education partnerships between minority-serving colleges/universities and the NSF Division of Materials Research (DMR)-supported centers and/or facilities. **For more information, go to:** www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14606

Scientific Discovery through Advanced Computing (SciDac): High Energy Physics

Granting Agency: Office of Science
Current Closing Date for Applications: Jan, 7 2015
Estimated Total Program Funding: $0
Eligibility: All types of applicants are eligible to apply, except Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995. Other than as provided in the ?Individuals? or ?Domestic Entities? sections above, all prime recipients (lead organizations) receiving funding under this FOA must be incorporated (or otherwise formed) under the laws of a State or territory of the United States. If a

foreign entity applies for funding as a prime recipient, it must designate in all submissions (Letter of Intent, pre-application, and full application) a subsidiary or affiliate incorporated (or otherwise formed) under the laws of a State or territory of the United States to be the prime recipient. The submission must state the nature of the corporate relationship between the foreign entity and domestic subsidiary or affiliate. Foreign entities may request a waiver of this requirement in the full application. DOE has discretion to waive this requirement if it determines that it will further the purposes of this FOA and is otherwise in the interests of DOE. A foreign entity, with or without a subsidiary or affiliate incorporated (or otherwise formed) under the laws of a state or territory of the United States, may receive funding as a subawardee (team member).
CFDA Number: 81.049 – Office of Science Financial Assistance Program
Funding Opportunity Number: DE-FOA-0001210
The Office of High Energy Physics (HEP) http://science.energy.gov/hep/research/ and the Office of Advanced Scientific Computing Research (ASCR) http://science.energy.gov/ascr/research/ of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announce their interest in receiving peer reviewable proposals from interdisciplinary multi-institutional teams to the Scientific Discovery through Advanced Computing (SciDAC) program, for Scientific Computation Application Partnerships (hereafter, Partnerships) in the area of computational high energy physics. Applications should propose two-year research plans and demonstrate how the proposed research will advance the HEP mission http://science.energy.gov/hep/about by fully exploiting leadership class computing resources (by which we mean those existing at or planned in the next five years for the Oak Ridge and Argonne Leadership Computing Facilities, or the high performance production computationa l systems at the National Energy Research Scientific Computing Center, or similar computing facilities, see http://science.energy.gov/ascr/facilities/.) Proposals should focus on computational advances for the HEP Science drivers http://science.energy.gov/hep/research/science-drivers-of-particle-physics/ and be aligned with 2014 P5 priorities. Proposals from established areas for use of supercomputers such as Computational Cosmology, Lattice Gauge Theory, and Accelerator Modeling and Simulation will be considered along with those from emerging HPC users. Innovative research for HEP data analysis and simulation tools and HEP crosscut initiatives are included in the scope of this Funding Opportunity Announcement. Proposals must demonstrate viable partnerships with ASCR SciDAC Institutes http://science.energy.gov/ascr/research/scidac/scidac-institutes/ and propose ways to contribute to cross cut computational needs of the HEP community. Partnerships are encouraged to request joint fu nding from HEP and ASCR Offices under this Announcement by stating the requested funding amounts from HEP and ASCR, respectively, and supporting their proposed funding distribution in the budget justification (see Management Plan). All proposers should provide clear plans for engagement with the ASCR SciDAC Institutes as applicable and propose contributions to HEP cross cut computing. **For more information, go to:** https://www.fedconnect.net/FedConnect/Default.htm

Atmospheric and Geospace Sciences Postdoctoral Research Fellowships

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 12 2015
Number of Awards: 10

Estimated Total Program Funding: $1,720,000
Eligibility: Organization Limit: Proposals may only be submitted by the following: - AGS Postdoctoral Research Fellowships are awards to individuals; proposals are submitted directly by the fellowship candidate to NSF. Each candidate must identify one or more sponsoring scientist(s) and host institution(s) in the proposal. Activities supported by the AGS Fellowship program may be conducted at any appropriate U.S. or foreign host institution. Appropriate institutions include colleges and universities, private nonprofit institutes and museums, government installations and laboratories.
CFDA Number: 47.050 -- Geosciences
Funding Opportunity Number: 14-509
The Division of Atmospheric and Geospace Sciences (AGS) awards Postdoctoral Research Fellowships (PRF) to highly qualified investigators within 3 years of obtaining their PhD to carry out an independent research program. The research plan of each Fellowship must address scientific questions within the scope of AGS disciplines. The program supports researchers for a period of up to 2 years with Fellowships that can be taken to the institution or national facility of their choice. The program is intended to recognize beginning investigators of significant potential, and provide them with experience in research that will broaden perspectives, facilitate interdisciplinary interactions and help establish them in leadership positions within the Atmospheric and Geospace Sciences community. Because the Fellowships are offered only to postdoctoral scientists early in their careers, doctoral advisors are encouraged to discuss the availability of AGS Postdoctoral Research Fellowships with their graduate students early in their doctoral programs. Fellowships are awards to individuals, not institutions, and are administered by the Fellows. **For more information, go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14509

Petrology and Geochemistry

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 12 2015
Number of Awards: 60
Estimated Total Program Funding: $13,500,000
Eligibility: Unrestricted
CFDA Number: 47.050 -- Geosciences
Funding Opportunity Number: 14-501
The Petrology and Geochemistry Program supports basic research on the formation of planet Earth, including its accretion, early differentiation, and subsequent petrologic and geochemical modification via igneous and metamorphic processes. Proposals in this program generally address the petrology and high-temperature geochemistry of igneous and metamorphic rocks (including mantle samples), mineral physics, economic geology, and volcanology. Proposals that are focused on the development of analytical tools, theoretical and computational models, and experimental techniques for applications by the igneous and metamorphic petrology, and high temperature geochemistry communities are also invited. **For more information, go to:**
www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14501

ROSES 2014: Computational Modeling Algorithms and Cyberinfrastructure

Granting Agency: NASA Headquarters
Current Closing Date for Applications: Jan, 9 2015
Eligibility: Proposers must be affiliated with an institution at nspires.nasaprs.com/ and, in general, NASA provides funding only to US institutions. Organizations outside the U.S. that propose on the basis of a policy of no-exchange-of-funds; consult Appendix B Section (l) of the guidebook for proposers (http://www.hq.nasa.gov/office/procurement/nraguidebook/) for specific details. Some NRAs may be issued jointly with a non-U.S. organization, e.g., those concerning guest observing programs for jointly sponsored space science programs, that will contain additional special guidelines for non-U.S. participants. Also ref. Sections 2.3.10(c)(vii) of the guidebook for proposers for special instructions for proposals from non-U.S. organizations that involve U.S. personnel for whom NASA support is requested.
CFDA Number: 43.001 Science
Funding Opportunity Number: NNH14ZDA001N-CMAC
This ROSES-2014 NRA (NNH14ZDA001N) solicits basic and applied research in support of NASA's Science Mission Directorate (SMD). This NRA covers all aspects of basic and applied supporting research and technology in space and Earth sciences, including, but not limited to: theory, modeling, and analysis of SMD science data; aircraft, scientific balloon, sounding rocket, International Space Station, CubeSat, and suborbital reusable launch vehicle investigations; development of experiment techniques suitable for future SMD space missions; development of concepts for future SMD space missions; development of advanced technologies relevant to SMD missions; development of techniques for and the laboratory analysis of both extraterrestrial samples returned by spacecraft, as well as terrestrial samples that support or otherwise help verify observations from SMD Earth system science missions; determination of atomic and composition parameters needed to analyze space data, as well as returned samples from the Earth or space; Earth surface observations and field campaigns that support SMD science missions; development of integrated Earth system models; development of systems for applying Earth science research data to societal needs; and development of applied information systems applicable to SMD objectives and data. **For more information, go to:** http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={5924CEB3-4EB7-FEF1-C85B-DD5745C1331C}&path=open

Tectonics

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 12 2015
Expected Number of Awards: 50
Estimated Total Program Funding: $9,300,000
Eligibility: Proposals may only be submitted by the following: -Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities. -Universities and Colleges - Universities and two- and four-year colleges (including community colleges)

accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.
CFDA Number: 93.865 – 47.050 -- Geosciences
Funding Opportunity Number: 14-609
The Tectonics Program supports a broad range of field, laboratory, computational, and theoretical investigations aimed at understanding the deformation of the terrestrial continental lithosphere (i.e. above the lithosphere-asthenosphere boundary). The Program focuses on non-magmatic deformation processes and their tectonic drivers that operate at any depth within the continental lithosphere, on time-scales of decades/centuries (e.g. active tectonics) and longer, and at micro- to plate boundary/orogenic belt length-scales. **For more information, go to:** www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14609

National Robotics Initiative

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 14 2015
Expected Number of Awards: 70
Estimated Total Program Funding: $50,000,000
Eligibility: Organizational eligibility is contained in the NSF Grant Proposal Guide (GPG). (The complete text of the GPG is available electronically on the NSF website at: (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg). Additional eligibility restrictions apply to USDA/NIFA grants (see section IV). Commercial enterprises with greater emphasis on development activities should consider the SBIR/STTR companion programs (http://www.nsf.gov/eng/iip/sbir) and other agency SBIR/STTR websites. For USDA/NIFA: Eligible applicants for the grant program implemented under this subpart include: (1) State agricultural experiment stations; (2) colleges and universities (including junior colleges offering associate degrees or higher); (3) university research foundations; (4) other research institutions and organizations; (5) Federal agencies, (6) national laboratories; (7) private organizations or corporations; (8) individuals who are U.S. citizens, nationals, or permanent residents; and (9) any group consisting of 2 or more entities identified in (1) through (8). Eligible institutions do not include foreign and international organizations. *Who May Serve as PI: There are no restrictions or limits.
CFDA Number: 10.310 -- Agriculture and Food Research Initiative (AFRI); 43.001 – Science; 43.008 – Education; 47.041 -- Engineering Grants; 47.070 -- Computer and Information Science and Engineering; 47.075 -- Social, Behavioral, and Economic Sciences; 47.076 -- Education and Human Resources; 93.173 -- Research Related to Deafness and Communication Disorders; 93.286 -- Discovery and Applied Research for Technological Innovations to Improve Human Health; 93.361 -- Nursing Research; 93.853 -- Extramural Research Programs in the Neurosciences and Neurological Disorders; 93.865 -- Child Health and Human Development Extramural Research; 93.866 -- Aging Research; 93.867 -- Vision Research
Funding Opportunity Number: 15-505
The goal of the National Robotics Initiative is to accelerate the development and use of robots in the United States that work beside or cooperatively with people. Innovative robotics research and applications emphasizing the realization of such co-robots working in symbiotic relationships with human partners is supported by multiple agencies of the federal government including the National Science Foundation (NSF), the National Aeronautics and Space Administration

(NASA), the National Institutes of Health (NIH), the U.S. Department of Agriculture (USDA), and the U.S. Department of Defense (DOD). The purpose of this program is the development of this next generation of robotics, to advance the capability and usability of such systems and artifacts, and to encourage existing and new communities to focus on innovative application areas. It will address the entire life cycle from fundamental research and development to manufacturing and deployment. Questions concerning a particular project's focus, direction and relevance to a participating funding organization should be addressed to that agency's point of contact listed in section VIII of this solicitation. Methods for the establishment and infusion of robotics in educational curricula and research to gain a better understanding of the long-term social, behavioral and economic implications of co-robots across all areas of human activity are important parts of this initiative. Collaboration between academic, industry, non-profit and other organizations is strongly encouraged to establish better linkages between fundamental science and technology development, deployment and use. Only one class of proposals will be considered in response to this solicitation; there will not be separate competitions for small, medium, and large proposals. Please refer to section III of this solicitation for budget size information. **For more information, go to:**
www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15505

Developmental and Learning Sciences

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 15 2015
Expected Number of Awards: 28
Estimated Total Program Funding: $6,000,000
Eligibility: Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: PD-08-1698
DLS supports fundamental research that increases our understanding of cognitive, linguistic, social, cultural, and biological processes related to children's and adolescents' development and learning. Research supported by this program will add to our basic knowledge of how people learn and the underlying developmental processes that support learning, with the objective of leading to better educated children and adolescents who grow up to take productive roles as workers and as citizens.Among the many research topics supported by DLS are: developmental cognitive neuroscience; development of higher-order cognitive processes; transfer of knowledge from one domain or situation to another; use of molecular genetics to study continuities and discontinuities in development; development of peer relations and family interactions; multiple influences on development, including the impact of family, school, community, social institutions, and the media; adolescents’ preparation for entry into the workforce; cross-cultural research on development and learning; and the role of cultural influences and demographic characteristics on development. Additional priorities include research that: incorporates multidisciplinary, multi-method, microgenetic, and longitudinal approaches; develops new methods, models, and theories for studying learning and development; and integrates different processes (e.g., learning, memory, emotion), levels of analysis (e.g., behavioral, social, neural), and time scales (e.g. infancy, middle childhood, adolescence). This program supports Integrative Research Activities for Developmental Science (IRADS). The program currently is at its capacity for supporting such large-scale awards, and is therefore not

considering new IRADS proposals at this point in time. The program is accepting proposals for individual investigator projects (average total budget of approximately $100,000 per year) and workshops/ small conferences (average total one-time budget of approximately $15,000). **For more information, go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=8671

Linguistics

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 15 2015
Expected Number of Awards: 0
Estimated Total Program Funding: $6,000,000
Eligibility: Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: PD-98-1311
The Linguistics Program supports all types of scientific research that focuses on human language as an object of investigation. The program supports research on the syntactic, semantic, morphological, phonetic, and phonological properties of individual languages and of language in general. It also encourages investigation of linguistic questions that are interdisciplinary in nature: the psychological processes involved in the production, perception, and comprehension of language; the development of linguistic capacities in children; social and cultural factors in language use, variation, and change; the acoustics and physiology of speech; computational approaches to the study of language; and the biological bases of language in the brain.The Linguistics Program accepts proposals for a variety of project types: research proposals from scholars with PhDs or equivalent degrees, proposals for Doctoral Dissertation Improvement Grants, and CAREER proposals. We will also consider proposals for workshops, conferences, and training programs.For more information about the Crosscutting Research and Training Opportunities, please visit the Cross-Directorate Activities web page. Here, you will find a brief synopsis about each program, as well as links guiding you to the appropriate Program Solicitations. **For more information, go to:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5408

Social Psychology

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 15 2015
Eligibility: Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: PD-98-1332
The Social Psychology Program at NSF supports basic research on human social behavior, including cultural differences and development over the life span. Among the many research topics supported are: attitude formation and change, social cognition, personality processes, interpersonal relations and group processes, the self, emotion, social comparison and social influence, and the psychophysiological and neurophysiological bases of social behavior. The scientific merit of a proposal depends on four important factors: (1) The problems investigated must be theoretically grounded. (2) The research should be based on empirical observation or be

subject to empirical validation. (3) The research design must be appropriate to the questions asked. (4) The proposed research must advance basic understanding of social behavior.
For more information, go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5712

Linguistics Program – Doctoral Dissertation Research Improvement Awards

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 15 2015
Eligibility: Proposals may only be submitted by the following: - Universities and Colleges - Ph.D. granting universities and colleges accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions. *Who May Serve as PI: DDRI proposals must be submitted with a principal investigator (PI) and a co-principal investigator (co-PI). The PI must be the advisor of the doctoral student or another faculty member at the U.S. university where the doctoral student is enrolled. The doctoral student must be a co-PI.
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: 14-551
The Linguistics Program supports basic science in the domain of human language, encompassing investigations of the grammatical properties of individual human languages, and of natural language in general. Research areas include syntax, linguistic semantics and pragmatics, morphology, phonetics, and phonology.The program encourages projects that are interdisciplinary in methodological or theoretical perspective, and that address questions that cross disciplinary boundaries, such as (but not limited to):What are the psychological processes involved in the production, perception, and comprehension of language? What are the computational properties of language and/or the language processor that make fluent production, incremental comprehension or rapid learning possible?How do the acoustic and physiological properties of speech inform our theories of language and/or language processing?What role does human neurobiology play in shaping the various components of our linguistic capacities?How does language develop in children? What social and cultural factors underlie language variation and change? The Linguistics Program does not make awards to support clinical research projects, nor does it support work to develop or assess pedagogical methods or tools for language instruction.DDRI proposals to document the linguistic properties of endangered languages should be submitted to the Documenting Endangered Languages (DEL) Program: **For more information, go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12816.
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14551

Law & Social Sciences

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 15 2015
Expected Number of Awards: 75
Estimated Total Program Funding: $5,000,000
Eligibility: Proposals may only be submitted by the following: - Organization limit varies by the mode of support: --Standard Research Grants and Grants for Collaborative Research: No

limitations (see the GPG for categories of proposers eligible to submit proposals to NSF). --Interdisciplinary Postdoctoral Fellowships: US Academic Institutions. --Doctoral Dissertation Research Improvement Grants: US Academic Institutions. --Conference and Workshop Support: No limitations (see the GPG for categories of proposers eligible to submit proposals to NSF). See Section II. Program Description for detailed information about each mode of support. *PI Limit: PI eligibility limit varies by the mode of support. See Section II. Program Description for detailed information about each mode of support.
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: 12-507
The Law & Social Sciences Program considers proposals that address social scientific studies of law and law-like systems of rules. The program is inherently interdisciplinary and multi-methodological. Successful proposals describe research that advances scientific theory and understanding of the connections between law or legal processes and human behavior. Social scientific studies of law often approach law as dynamic, made in multiple arenas, with the participation of multiple actors. Fields of study include many disciplines, and often address problems including though not limited to:Crime, Violence and PunishmentEconomic IssuesGovernanceLegal DecisionmakingLegal Mobilization and Conceptions of JusticeLitigation and the Legal ProfessionLSS provides the following modes of support:Standard Research Grants and Grants for Collaborative ResearchDoctoral Dissertation Research Improvement GrantsInterdisciplinary Postdoctoral FellowshipsWorkshop and Conference Proposals **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12507

Sedimentary Geology and Paleobiology

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 15 2015
Expected Number of Awards: 50
Estimated Total Program Funding: $8,100,000
Eligibility: Unrestricted
CFDA Number: 47.050 – Geosciences
Funding Opportunity Number: 12-608
The Sedimentary Geology and Paleobiology Program (SGP) supports research in a wide variety of areas in sedimentary geology and paleobiology in order to comprehend the full range of physical, biological, and chemical processes of Earth's dynamic system. The program supports the study of deep-time records of these processes archived in the Earth's sedimentary carapace (crust) at all spatial and temporal scales. These records are fingerprints of the processes that produced them and continue to shape the Earth.For the years 2013-2017, the Sedimentary Geology and Paleobiology Program will be sponsoring a two track opportunity that will consist of the normal SGP competition (Track 1) and bi-annually, a new track termed Earth-Life Transitions (ELT) (Track 2).Track 1: General Program: Sedimentary Geology and Paleobiology supports general studies of: (1) the changing aspects of life, ecology, environments, and biogeography in past geologic time based on fossil plants, animals, and microbes; (2) all aspects of the Earth's sedimentary carapace - insights into geological processes recorded in its records and rich organic and inorganic resources locked in rock sequences; (3) the science of dating and measuring the sequence of events and rates of geological processes as manifested in Earth's past sedimentary and biological (fossil) record; (4) the geologic record of the production,

transportation, and deposition of physical and chemical sediments; and (5) understanding Earth's deep-time (pre-Holocene) climate systems.Track 2: Earth-Life Transitions: In fiscal years 2013-2017, the Sedimentary Geology and Paleobiology program is sponsoring a bi-annual second track opportunity termed Earth-Life Transitions (ELT) within the normal programmatic spring competition. The goals of the ELT track are: 1) to address critical questions about Earth-Life interactions in deep-time through the synergistic activities of multi-disciplinary science and 2) to enable team-based interdisciplinary projects involving stratigraphy, sedimentology, paleontology, proxy development, calibration and application studies, geochronology, and climate modeling at appropriately resolved scales of time and space, to understand major linked events of environmental, climate and biotic change at a mechanistic level. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12608

Sociology

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 15 2015
Eligibility: Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: PD-98-1331
The Sociology Program supports basic research on all forms of human social organization -- societies, institutions, groups and demography -- and processes of individual and institutional change. The Program encourages theoretically focused empirical investigations aimed at improving the explanation of fundamental social processes. Included is research on organizations and organizational behavior, population dynamics, social movements, social groups, labor force participation, stratification and mobility, family, social networks, socialization, gender roles, and the sociology of science and technology. The Program supports both original data collections and secondary data analysis that use the full range of quantitative and qualitative methodological tools. Theoretically grounded projects that offer methodological innovations and improvements for data collection and analysis are also welcomed. Click here for information on Strengthening Qualitative Research through Methodological Innovation and Integration. The Sociology Program also funds doctoral dissertation research to defray direct costs associated with conducting research, for example, dataset acquisition, additional statistical or methodological training, meeting with scholars associated with original datasets, and fieldwork away from the student's home campus. Please click here for additional information on the Sociology Doctoral Dissertation Improvement Grant.Please Note: Principal Investigators should select PD 98-1331 in the program announcement/solicitation block on the proposal Cover Sheet for submission of projects to the Sociology Program.Projects are evaluated using the two Foundation-wide criteria, intrinsic merit and broader impacts. In assessing the intrinsic merit of proposed research, four components are key to securing support from the Sociology Program: (1) the issues investigated must be theoretically grounded; (2) the research should be based on empirical observation or be subject to empirical validation or illustration; (3) the research design must be appropriate to the questions asked; and (4) the proposed research must advance our understanding of social processes, structures and methods.The NSF also offers a number of specialized funding opportunities through its crosscutting and cross-directorate activities; some of the Sociology related opportunities are listed below.Crosscutting Research & Training Opportunities:ADVANCE: Increasing the Participation and Advancement of Women in

Academic Science and Engineering CareersFaculty Early Career Development (CAREER) ProgramEducation & Human Resources ProgramGraduate Research Fellowship ProgramIntegrative Graduate Education and Research Traineeship (IGERT) ProgramMajor Research Instrumentation (MRI) ProgramSBE Minority Postdoctoral Research Fellowships (MPRF)Research Experiences for Undergraduates (REU)Research at Undergraduate Institutions (RUI)Science of Learning Centers (SLC)Science and Technology Centers: Integrative PartnershipsSmall Business Innovation Research (SBIR) ProgramTo get information about these programs and others, please visit the Cross-cutting and NSF-wide Active Funding Opportunities homepage. **For more information, go to:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5369

Cultural Anthropology Program; Doctoral Dissertation Research Improvement Grants

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 15 2015
Expected Number of Awards: 50
Estimated Total Program Funding: $800,000
Eligibility: Proposals may only be submitted by the following: - Universities and Colleges - Ph.D. granting universities and colleges accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations are also referred to as academic institutions. *Who May Serve as PI: The proposal must be submitted through regular organizational channels by the dissertation advisor(s) on behalf of the graduate student. The student must be the author of the proposal. The student must be enrolled at a U.S. institution, but need not be a U.S. citizen.
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: 14-560
The primary objective of the Cultural Anthropology Program is to support basic scientific research on the causes, consequences, and complexities of human social and cultural variability. Anthropological research spans a wide gamut, and contemporary cultural anthropology is an arena in which diverse research traditions and methodologies are valid. Recognizing the breadth of the field’s contributions to science, the Cultural Anthropology Program welcomes proposals for empirically grounded, theoretically engaged, and methodologically sophisticated research in all sub-fields of cultural anthropology. Because the National Science Foundation’s mandate is to support basic research, the NSF Cultural Anthropology Program does not fund research that takes as its primary goal improved clinical practice or applied policy. Program research priorities include, but are not limited to, research that increases our understanding of:Socio-cultural drivers of critical anthropogenic processes such as deforestation, desertification, land cover change, urbanization, and povertyResilience and robustness of socio-cultural systemsConflict, cooperation, and altruismEconomy, culture, migration, and globalizationVariability and change in kinship and family norms and practicesCultural and social contexts of health and diseaseSocial regulation, governmentality, and violenceOrigins of complexity in socio-cultural systemsLanguage and culture: orality and literacy, sociolinguistics, and cognitionHuman variation through empirically grounded ethnographic descriptionsMathematical and computational models of sociocultural systems such

as social network analysis, agent-based models, and integration of agent-based models with geographic information systems (GIS)As part of its effort to encourage and support projects that explicitly integrate education and basic research, CA provides support to enhance and improve the conduct of doctoral dissertation projects carried out by doctoral students enrolled in U.S. universities who are conducting scientific research that enhances basic scientific knowledge.
For more information, go to:
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14560

Political Science

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 15 2015
Eligibility: Nonprofits that do not have a 501(c)(3) status with the IRS, other than institutions of higher education; Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education; Private institutions of higher education; Public and State controlled institutions of higher education
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: PD-98-1371
The Political Science Program supports scientific research that advances knowledge and understanding of citizenship, government, and politics. Research proposals are expected to be theoretically motivated, conceptually precise, methodologically rigorous, and empirically oriented. Substantive areas include, but are not limited to, American government and politics, comparative government and politics, international relations, political behavior, political economy, and political institutions.In recent years, program awards have supported research projects on bargaining processes; campaigns and elections, electoral choice, and electoral systems; citizen support in emerging and established democracies; democratization, political change, and regime transitions; domestic and international conflict; international political economy; party activism; political psychology and political tolerance. The Program also has supported research experiences for undergraduate students and infrastructural activities, including methodological innovations, in the discipline.Besides information on the Political Science Program, we invite you to also look at the Cross-Directorate Activities program web site.Furthermore, for program specific guidelines on the Doctoral Dissertation Improvement Grant, please view the: Doctoral Preparation Checklist. **For more information, go to:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5418

Research on the Science and Technology Enterprise: Statistics and Surveys

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 15 2015
Expected Number of Awards: 12
Estimated Total Program Funding: $750,000
Eligibility: Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: 12-545

The National Center for Science and Engineering Statistics (NCSES) of the National Science Foundation (NSF) is one of the thirteen principal federal statistical agencies within the United States. It is responsible for the collection, acquisition, analysis, reporting and dissemination of objective, statistical data related to the science and engineering enterprise in the United States and other nations that is relevant and useful to practitioners, researchers, policymakers and the public. NCSES uses this information to prepare a number of statistical data reports as well as analytical reports including the National Science Board's biennial report, Science and Engineering (S&E) Indicators, and Women, Minorities and Persons with Disabilities in Science and Engineering. The Center would like to enhance its efforts to support analytic and methodological research in support of its surveys, and to engage in the education and training of researchers in the use of large-scale nationally representative datasets. NCSES welcomes efforts by the research community to use NCSES data for research on the science and technology enterprise, to develop improved survey methodologies for NCSES surveys, to create and improve indicators of S&T activities and resources, and strengthen methodologies to analyze and disseminate S&T statistical data. To that end, NCSES invites proposals for individual or multi-investigator research projects, doctoral dissertation improvement awards, workshops, experimental research, survey research and data collection and dissemination projects under its program for Research on the Science and Technology Enterprise: Statistics and Surveys. **For more information, go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12545

Minor Use Minor Species Development Drugs

Granting Agency: Food & Drug Administration
Current Closing Date for Applications: Jan, 16 2015
Expected Number of Awards: 10
Estimated Total Program Funding: $750,000
Eligibility: Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education; Independent school districts; Public housing authorities/Indian housing authorities; Nonprofits that do not have a 501(c)(3) status with the IRS, other than institutions of higher education; Private institutions of higher education; Public and State controlled institutions of higher education; Small businesses; For profit organizations other than small businesses
CFDA Number: 93.103 -- Food and Drug Administration_Research
Funding Opportunity Number: RFA-FD-12-003
Grants will be awarded up to $75,000 or up to $125,000 in total (direct plus indirect) costs per year for up to three (3) years. Please note the dollar limitation will apply to total costs, not direct costs. Applications for the smaller grants ($75,000) may be for any safety or effectiveness study supportive of new animal drug approval or conditional approval of the designated product for a designated intended use. Study proposals for the larger grants ($125,000) must be for studies that are of necessity of unusual complexity, duration, or size. FDA grants policies as described in the HHS Grants Policy Statement http://www.hhs.gov/grantsnet/adminis/gpd/index.htm will apply to the applications submitted and awards made in response to this FOA.Facilities and Administrative (F&A) costs requested by consortium participants are not included in the direct cost limitation. See NOT-OD-05-004.

Geomorphology and Land-use Dynamics

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 16 2015
Expected Number of Awards: 35
Estimated Total Program Funding: $5,000,000
Eligibility: Unrestricted
CFDA Number: 47.050 -- Geosciences
Funding Opportunity Number: 14-550
Geomorphology and Land-use Dynamics supports innovative research into processes that shape and modify landscapes over a variety of length and time scales. The program encourages research that investigates quantitatively the coupling and feedback among such processes, their rates, and their relative roles, especially in the contexts of variation in climatic, biologic, and tectonic influences and in light of changes due to human impact. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14550

Geobiology and Low-Temperature Geochemistry

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 16 2015
Expected Number of Awards: 40
Estimated Total Program Funding: $5,200,000
Eligibility: Unrestricted
CFDA Number: 47.050 -- Geosciences
Funding Opportunity Number: 09-552
The Geobiology and Low-Temperature Geochemistry Program supports research on 1) the interactions between biological and geological systems at all scales of space and time; 2) geomicrobiology and biomineralization processes; 3) the role of life in the transformation and evolution of the Earth's geochemical cycles; 4) inorganic and organic geochemical processes occurring at or near the Earth's surface now and in the past, and at the broad spectrum of interfaces ranging in scale from planetary and regional to mineral-surface and supramolecular; 5) mineralogy and chemistry of soils and sediments; 6) surficial chemical and biogeochemical systems and cycles and their modification through natural and anthropogenic change; and 7) development of tools, methods, and models for low-temperature geochemistry and geobiological research - such as those emerging from molecular biology - in the study of the terrestrial environment. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf09552

Systems Biology Research to Advance Sustainable Bioenergy Crop Development

Granting Agency: Office of Science

Current Closing Date for Applications: Jan, 16 2015
Expected Number of Awards: 8
Estimated Total Program Funding: $15,000,000
Eligibility: Unrestricted
CFDA Number: 81.049 -- Office of Science Financial Assistance Program

Funding Opportunity Number: DE-FOA-0001207
The Office of Biological and Environmental Research (BER) of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving applications for research that supports the Genomic Science research program (http://genomicscience.energy.gov). In this FOA, applications are requested for: i) Systems-level research to better understand the molecular and physiological mechanisms that control bioenergy crop vigor, resource use efficiency, and resilience/adaptability to abiotic stress, as well as interactions with the surrounding environment, in order to increase biomass productivity under changing and at times suboptimal conditions; ii) Systems biology-enabled investigations into the role(s) of microbial and microbial communities in the complex and multi-scaled interactions of the plant-soil-environment: contribution(s) to bioenergy feedstock plant performance, adaptation, and resilience in the face of a broad range of changing environmental conditions and abiotic stressors (e.g., climate), and the impacts of introducing bioenergy cropping systems on the local ecosystem. **For more information, go to:** https://www.fedconnect.net/

Cultural Anthropology Scholars Awards

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 16 2015
Expected Number of Awards: 82
Estimated Total Program Funding: $100,000
Eligibility: Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: 07-544
The National Science Foundation announces an opportunity for methodological training by cultural anthropologists who are active researchers. The purpose is to help cultural anthropologists upgrade their methodological skills by learning a specific analytical technique which will improve their research abilities. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf07544

Economics

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 16 2015
Expected Number of Awards: 110
Estimated Total Program Funding: $220,000
Eligibility: Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: PD-98-1320
The Economics program supports research designed to improve the understanding of the processes and institutions of the U.S. economy and of the world system of which it is a part. This

program also strengthens both empirical and theoretical economic analysis as well as the methods for rigorous research on economic behavior. It supports research in almost every area of economics, including econometrics, economic history, environmental economics, finance, industrial organization, international economics, labor economics, macroeconomics, mathematical economics, and public finance.The Economics program welcomes proposals for individual or multi-investigator research projects, doctoral dissertation improvement awards, conferences, workshops, symposia, experimental research, data collection and dissemination, computer equipment and other instrumentation, and research experience for undergraduates. The program places a high priority on interdisciplinary research. Investigators are encouraged to submit proposals of joint interest to the Economics Program and other NSF programs and NSF initiative areas. The program places a high priority on broadening participation and encourages proposals from junior faculty, women, other underrepresented minorities, Research Undergraduate Institutions, and EPSCoR states.The program also funds conferences and interdisciplinary research that strengthens links among economics and the other social and behavioral sciences as well as mathematics and statistics.For additional funding opportunities, we invite you to also look at the Cross Disciplinary Activities homepage.For program specific guidelines on the Doctoral Dissertation Improvement Grants in Economics, please visit: Doctoral Preparation Checklist. **For more information, go to:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5437

Decision, Risk and Management Sciences

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 18 2015
Eligibility: Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: PD-98-1321
The Decision, Risk and Management Sciences program supports scientific research directed at increasing the understanding and effectiveness of decision making by individuals, groups, organizations, and society. Disciplinary and interdisciplinary research, doctoral dissertation research, and workshops are funded in the areas of judgment and decision making; decision analysis and decision aids; risk analysis, perception, and communication; societal and public policy decision making; management science and organizational design. The program also supports small grants that are time-critical and small grants that are high-risk and of a potentially transformative nature (see Grants for Rapid Response Research (RAPID) and EArly-concept Grants for Exploratory Research (EAGER).)Funded research must be grounded in theory and generalizable. Purely algorithmic management science proposals should be submitted to the Operations Research Program rather than to DRMS.For additional funding opportunities, we invite you to also look at the Cross-Directorate Activities program website.For program specific guidelines on the Doctoral Dissertation Improvement Grants in DRMS, please visit: Doctoral Preparation Checklist. **For more information, go to:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5423

Scalable Nanomanufacturing

Granting Agency: National Science Foundation

Current Closing Date for Applications: Jan, 20 2015
Expected Number of Awards: 8
Estimated Total Program Funding: $5,000,000
Eligibility: Proposals may only be submitted by the following: -Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions. *Who May Serve as PI:Principal Investigators must be at the faculty level or equivalent
CFDA Number: 47.041 -- Engineering Grants; 47.049 -- Mathematical and Physical Sciences12.420 -- Military Medical Research and Development
Funding Opportunity Number: 15-507
The National Science Foundation (NSF) announces a fifth year of a program on collaborative research and education in the area of Scalable Nanomanufacturing. This program is in response to and is a component of the National Nanotechnology Initiative Signature Initiative: Sustainable Nanomanufacturing - Creating the Industries of the Future (http://www.nano.gov/node/611.) Although many nanofabrication techniques have demonstrated the ability to fabricate small quantities of nanomaterials, nanostructures and nanodevices for characterization and evaluation purposes, the emphasis of the Scalable Nanomanufacturing program is on research to overcome the key scientific and technical barriers that prevent the production of useful nanomaterials, nanostructures, devices and systems at an industrially relevant scale, reliably, and at low cost and within environmental, health and safety guidelines. Competitive proposals will incorporate three elements in their research plans: ·A persuasive case that the nanomaterials, nanostructures, devices or systems to be produced have or are likely to have sufficient demand to justify eventual scale-up; · A clearly identified set of research issues for science and engineering solutions that must be addressed to enable the production of high quality nano-enabled products at low cost; and · A compelling research plan with clear objectives and approaches to overcome the identified research issues. The mode of support is Nanoscale Interdisciplinary Research Teams (NIRT). Proposals submitted to this program should consider addressing aspects of the nanomanufacturing value chain: · Novel scalable processes and techniques for large-area or continuous manufacturing of nano-scale materials and structures and their assembly and integration into higher order systems; · Fundamental scientific research in well-defined technical areas that are compellingly justified as approaches to overcome critical barriers to scale-up and integration; and · Design principles for production systems leading to nanomanufacturing platforms; identification of metrology, instrumentation, standards and control methodologies needed for process control and to assess quality and yield. Competitive proposals are expected to address the training and education of students in nanomanufacturing. An inter-disciplinary approach is strongly encouraged. Disciplines could range from mathematics to the physical sciences to engineering. While not required, the involvement of an industrial or small business partner or partners is encouraged. These collaborations have the potential to significantly strengthen a proposal. Other research and education projects in nanoscale science and engineering will continue to be supported in the relevant programs and divisions. Please see requirements for submitting proposals for collaborations; a single proposal with sub-contracts must be submitted for collaborations and the submission of separate proposals from multiple investigators for collaborative projects ('collaborative proposals') is not allowed. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15507

US Ignite

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 21 2015
Expected Number of Awards: 10
Estimated Total Program Funding: $10,000,000
Eligibility: Unrestricted
CFDA Number: 47.041 -- Engineering Grants; 47.070 -- Computer and Information Science and Engineering
Funding Opportunity Number: 15-508
US Ignite is an Administration initiative seeking to promote US leadership in the development and deployment of next-generation gigabit applications with the potential for significant societal impact. The primary goal of US Ignite is to break a fundamental deadlock: there is insufficient investment in gigabit applications that can take advantage of advanced network infrastructure because such infrastructure is rare and dispersed. And conversely, there is a lack of broad availability of advanced broadband infrastructure for open experimentation and innovation because there are few advanced applications and services to justify it. US Ignite aims to break this deadlock by providing incentives for imagining, prototyping, and developing public sector gigabit applications, and by leveraging and extending this network testbed across US college/university campuses and cities. This solicitation builds on the experience gained from initial US Ignite activities to further engage the US academic research and non-profit communities along with local cities, municipalities, and regions in exploring the challenges of developing and applying next-generation networking to problems of significant public interest and benefit. In particular, this solicitation has two tracks: the first encourages the development of applications in national priority areas that explore new uses for networks, giving rise to novel networking and application paradigms; and the second expands and enhances the ecosystems in which these applications will evolve and be evaluated. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15508

Research in Engineering Education

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 22 2015
Expected Number of Awards: 20
Estimated Total Program Funding: $6,000,000
Eligibility: Unrestricted
CFDA Number: 47.041 -- Engineering Grants; 47.070 -- Computer and Information Science and Engineering
Funding Opportunity Number: 15-508
The Division of Engineering Education and Centers (EEC) seeks to enable a world-leading system of engineering education, equally open and available to all members of society, that dynamically and rapidly adapts to meet the changing needs of society and the nation's economy. Research areas of interest include, but are not limited to:Diversifying pathways to and through engineering degree programs. Research projects that align with this theme explore how engineering programs can engage and develop students with a broad range of backgrounds,

interests, and experiences; investigate how informal or real world experiences germane to engineering--such as military service or being a "maker"--impact, improve, or accelerate learning; or investigate how to fundamentally restructure courses, curricula, or programs to substantially boost student success, especially for under-represented populations and veterans. Understanding how to increase the diffusion and impact of engineering education research. Research projects are sought that discover how to improve the process by which engineering education research is translated into practice; how to accomplish organizational and cultural change in institutions of engineering education that leads to improved learning outcomes; or identifying and overcoming barriers to widespread adoption of engineering education research. Research projects that partner with other engineering education stakeholders (e.g. private companies, NGOs, or professional societies) to measure the value and impact of engineering education research on practice are also sought. Understanding engineering education in broader, organizing frameworks such as innovation, globalization, complex engineered systems, or sustainability. Research in this theme explores learning from perspectives and contexts that cut across disciplines and in which learners integrate expertise from multiple fields. Research projects that align with this theme include discovering processes to effectively teach engineering students to succeed in such environments or co-systems; discovering key concepts and principles of educating engineers within such frameworks; or exploring factors such as teamwork, communication, or identity formation in such environments. Increasing our understanding of how engineering students learn and the capacity that supports such discovery. Fundamental research is encouraged on how engineering is learned, including engineering epistemologies and identities; and how to evaluate or operationalize aspects of engineering thinking, doing, and knowing. More information can be found in the program's Frequently Asked Questions (FAQ), see link below. This program discourages proposals that seek to simply implement and/or evaluate pedagogical innovations that have been previously shown to be effective for engineering students; such projects may be considered in the TUES program of DUE. An ideal engineering education research project addresses the iterative cycle in which research questions that advance understanding are informed by practice and the results of research are, in turn, translated into practice. In discussing how the planned work advances understanding, competitive proposals will ground the proposed work in a theoretical framework and frame the project in the context of relevant prior work. The proposal should discuss how the research results are broadly generalizable and transferable; the broader impacts of projects are an important part of NSF's merit review criteria. Successful projects will identify target audiences as well as effective communication methods to ensure broad dissemination. Competitive proposals also contain appropriate evaluation plans that inform the research effort and allow assessment of the project's impact and effectiveness. The REE program accepts a diverse range of project scales from small, exploratory projects to large investigations with a broad, systemic scope; project budgets should match the project scope. The number of awarded proposal is based on a projected average funding level of approximately $100,000 per project per year. All PIs are urged to discuss the budget of proposed projects with a cognizant program officer before submission. Because competitive proposals emphasize generalizable research that impacts engineering degree programs, teams which do not contain engineering faculty should contact a program officer before submission. Other considerations for proposals submitted to engineering education are outlined below: The duration of Faculty Early Career Development (CAREER) Program awards is five years. The submission deadline for Engineering CAREER proposals is in July every year. Supplements to existing awards may be submitted at any time, but must be

discussed with the program director before submission. Grants for Rapid Response Research (RAPID) and Early-concept Grants for Exploratory Research (EAGER) must be discussed with the program director before submission. Further details are available in the PAPPG download, available below. Please refer to the Proposal and Award Policies and Procedures Guide (PAPPG), when you prepare your proposal. **For more information, go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503584

Major Research Instrumentation Program

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 22 2015
Expected Number of Awards: 160
Estimated Total Program Funding: $75,000,000
Eligibility Proposals may only be submitted by the following: - Organizations that may apply for the MRI program: All MRI-eligible organizations belong to one of the following three categories: A. Ph.D.-granting institutions of higher education are accredited colleges and universitiesthat have awardedmore than 20 Ph.D or D.Sc. degrees in all NSF-supported fields during the combined previous two academic years.Additionally,any organization that awards Ph.D. or D.Sc. degrees in NSF-supported fields is considered to be a Ph.D.-granting institution if the only degreesit awardsin NSF-supported fields are post-Bachelor's degrees. B. Non-Ph.D.-granting institutions of higher education are accredited colleges and universities (including two-year community colleges) that award Associate's degrees, Bachelor's degrees, and/or Master's degrees in NSF-supported fields, but haveawarded 20 or fewer Ph.D./D.Sc.degrees in all NSF-supported fields during the combined previous two academic years. C. Non-degree-granting organizations are those that do not award Associate's degrees, Bachelor's degrees, Master's degrees, and/or Ph.Ds. or Ds.Sc.Non-degree-granting organizations also include institutions of higher education that award all of their degrees outside of NSF-supported fields.
CFDA Number: 47.041 -- Engineering Grants; 47.049 -- Mathematical and Physical Sciences; 47.050 – Geosciences; 47.070 -- Computer and Information Science and Engineering; 47.074 -- Biological Sciences; 47.075 -- Social, Behavioral, and Economic Sciences; 47.076 -- Education and Human Resources; 47.079 -- Office of International and Integrative Activities; 47.081 -- Office of Experimental Program to Stimulate Competitive Research
Funding Opportunity Number: 15-504
The Major Research Instrumentation Program (MRI) serves to increase access to shared scientific and engineering instruments for research and research training in our Nation's institutions of higher education, not-for-profit museums, science centers and scientific/engineering research organizations. The program provides organizations with opportunities to acquire major instrumentation that supports the research and research training goals of the organization and that may be used by other researchers regionally or nationally.?? Each MRI proposal may request support for the acquisition (Track 1) or development (Track 2) of a single research instrument for shared inter- and/or intra-organizational use.?? Development efforts that leverage the strengths of private sector partners to build instrument development capacity at MRI submission-eligible organizations are encouraged. The MRI program assists with the acquisition or development of a shared research instrument that is, in general, too costly and/or not appropriate for support through other NSF programs.?? The program does not fund research projects or provide ongoing support for operating or maintaining facilities or centers.

The instrument acquired or developed is expected to be operational for regular research use by the end of the award period. For the purposes of the MRI program, a proposal must be for either acquisition (Track 1) or development (Track 2) of a single, well-integrated instrument.??The MRI program does not support the acquisition or development of a suite of instruments to outfit research laboratories or facilities, or that can be used to conduct independent research activities simultaneously. Instrument acquisition or development proposals that request funds from NSF in the range $100,000-$4 million may be accepted from any MRI-eligible organization. Proposals that request funds from NSF less than $100,000 may also be accepted from any MRI-eligible organization for the disciplines of mathematics or social, behavioral and economic sciences and from non-Ph.D.-granting institutions of higher education for all NSF-supported disciplines. Cost-sharing of precisely 30% of the total project cost is required for Ph.D.-granting institutions of higher education and for non-degree-granting organizations. Non-Ph.D.-granting institutions of higher education are exempt from cost-sharing and cannot include it. National Science Board policy is that voluntary committed cost sharing is prohibited. Please see the solicitation text for definitions of organizational types used by the MRI program. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15504

Integrative Strategies for Understanding Neural and Cognitive Systems

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 26 2015
Expected Number of Awards: 25
Estimated Total Program Funding: $12,000,000
Eligibility: Unrestricted
CFDA Number: 47.041 -- Engineering Grants; 47.070 -- Computer and Information Science and Engineering; 47.075 -- Social, Behavioral, and Economic Sciences; 47.076 -- Education and Human Resources
Funding Opportunity Number: 14-611
The complexities of brain and behavior pose fundamental questions in many areas of science and engineering, drawing intense interest across a broad spectrum of disciplinary perspectives while eluding explanation by any one of them. Rapid advances within and across disciplines have led to newly converging theories, models, empirical methods and findings, opening new opportunities to understand complex aspects of the brain in action and in context. Innovative, integrative, boundary-crossing approaches are necessary to push the field forward. This solicitation describes the first phase of a new NSF program to support transformative and integrative research that will accelerate understanding of neural and cognitive systems. NSF seeks exceptional proposals that are bold, potentially risky, and transcend the perspectives and approaches typical of disciplinary research programs. This multi-directorate program is one element of NSF’s broader aim to foster innovation in Cognitive Science and Neuroscience, a multi-year effort that includes NSF’s participation in the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative (http://www.nsf.gov/brain/). For FY 2015, this competition is organized around two research themes: Neuroengineering and Brain-Inspired Concepts and Designs and Individuality and Variation. Within each theme, general advances in theory and methods, technological

innovations, educational approaches, enabling research infrastructure, and workforce development are all of significant interest. Competitive proposals must be consistent with the missions of the participating directorates. Potentially groundbreaking approaches that entail significant risk are encouraged. Two classes of proposals will be considered in FY 2015. INTEGRATIVE FOUNDATIONS awards will support projects that develop foundational advances that are deeply connected to a broad scope of important research questions in cognitive and neural systems, and have significant potential for transformative advances in one or more of the FY 2015 thematic areas. CORE+ EXTENSIONS will provide additional support to projects selected for funding by other programs in the participating offices and directorates, to enable additional activities that will connect those projects to significant new integrative opportunities in cognitive and neural systems. **For more information, go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14611

Exploiting Parallelism and Scalability

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 27 2015
Expected Number of Awards: 21
Estimated Total Program Funding: $14,000,000
Eligibility: Each FULL-SIZE proposal is required to have two or more PIs providing different and distinct expertise relevant to the program's focus areas.
CFDA Number: 47.070 -- Computer and Information Science and Engineering
Funding Opportunity Number: 15-511
Computing systems have undergone a fundamental transformation from the single-processor devices of the turn of the century to today's ubiquitous and networked devices and warehouse-scale computing via the cloud. Parallelism is abundant at many levels. At the same time, semiconductor technology is facing fundamental physical limits and single processor performance has plateaued. This means that the ability to achieve predictable performance improvements through improved processor technologies alone has ended. Thus, parallelism has become critically important. The Exploiting Parallelism and Scalability (XPS) program aims to support groundbreaking research leading to a new era of parallel computing. Achieving the needed breakthroughs will require a collaborative effort among researchers representing all areas -- from services and applications down to the micro-architecture -- and will be built on new concepts, theories, and foundational principles. New approaches to achieve scalable performance and usability need new abstract models and algorithms, new programming models and languages, new hardware architectures, compilers, operating systems and run-time systems, and must exploit domain and application-specific knowledge. Research is also needed on energy efficiency, communication efficiency, and on enabling the division of effort between edge devices and clouds. **For more information, go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15511

Partnerships for Innovation: Building Innovation Capacity

Granting Agency: National Science Foundation

Current Closing Date for Applications: Jan, 28 2015
Expected Number of Awards: 10
Estimated Total Program Funding: $10,000,000
Eligibility: Proposals may only be submitted by the following: - U.S. universities and two-and four-year colleges (including community and technical colleges) accredited in, and having a campus located in the U.S., acting on behalf of their faculty members. Such organizations also are referred to as academic institutions. The lead (submitting) organization must be an academic institution. Separately submitted collaborative proposals from different organizations requesting an individual award are not permitted. *Who May Serve as PI: The PI cannot concurrently be a PI on more than one active PFI:BIC award. A PI who is named in a proposal in response to this program solicitation may not be named in a proposal for funding consideration in the same fiscal year to the Partnerships for Innovation: Accelerating Innovation Research (PFI:AIR) program.
CFDA Number: 47.041 -- Engineering Grants; 47.070 -- Computer and Information Science and Engineering
Funding Opportunity Number: 14-610
The Partnerships for Innovation: Building Innovation Capacity (PFI:BIC) program supports academe-industry partnerships, which are led by an interdisciplinary academic research team with a least one industry partner to build technological, human, and service system innovation capacity. These partnerships focus on the integration of technologies into a specified human-centered smart service system with the potential to achieve transformational change in an existing service system or to spur an entirely new service system. These technologies have been inspired by existing breakthrough discoveries. Service systems are socio-technical configurations of people, technologies, organizations, and information designed to deliver services that create and deliver value [1]. A "smart" service system is a system capable of learning, dynamic adaptation, and decision making based upon data received, transmitted, and/or processed to improve its response to a future situation. The system does so through self-detection, self-diagnosing, self-correcting, self-monitoring, self-organizing, self-replicating, or self-controlled functions. These capabilities are the result of the incorporation of technologies for sensing, actuation, coordination, communication, control, etc. The system may exhibit a sequence of features such as detection, classification, and localization that lead to an outcome occurring within a reasonable time. PFI:BIC funds research partnerships working on projects that operate in the post-fundamental discovery space but precede being on a clear path to commercialization. These projects require additional effort to integrate the technology into a real service system with human factors considerations, which in turn might spawn additional discoveries inspired by this interaction of humans with the technology. Partnership activities that drive sustained innovation include the targeted allocation of resources such as capital, time, and facilities; and sharing of knowledge in a cross-organizational and interdisciplinary context. The project must involve research tasks that demonstrate a highly collaborative research plan with participation of the primary industrial partner with the academic researcher during the life of the award. Cultivating smart service systems requires not only the participation of the scientific discipline or disciplines related to the technology, but also of a range of other disciplines needed to achieve successful integration into a smart service system. The resulting system requires an understanding of human interaction with technology and a human-centered design to assure the desirability and the effectiveness of the proposed service system. Thus, in addition to the discipline related to the technology, the disciplines to be included in this project are 1) systems engineering or

engineering design, 2) computer science/information technology, and 3) human factors/behavioral science/cognitive engineering. Some teams not experienced with service engineering might benefit from consulting with an individual with expertise in service operations or service systems. NSF recognizes that the labels for the aforementioned disciplines may vary in different institutions and organizations, so what is important here is to demonstrate the equivalence of the representation of these disciplines. The proposer will be asked to show how the disciplines will be integrated in the context of the project as part of the research plan in the Project Description. Examples [2] of technology applied to service systems include smart healthcare, smart cities, on-demand transportation, precision agriculture, smart infrastructure, and other technologies enabling self-service and customized service solutions. WEBINARS: Webinars will be held to answer questions about the solicitation. Register on the PFI:BIC website where details will be posted (http://www.nsf.gov/eng/iip/pfi/bic.jsp). Potential proposers and their partners are encouraged to attend. Also, Vice Presidents for Research and academic personnel concerned with the review of their respective institution’s selection of candidates for submission, individuals from Sponsored Research Offices, and those focused on the identification and understanding of limited application submissions are encouraged to attend. [1] Spohrer J., Maglio P. P., Bailey J., Gruhl D. (2007). Steps towards a science of service systems. Computer 40(1):71-77. doi:10.1109/MC.2007.33. [2] Note that examples have been provided in this solicitation to offer a sense of the variety of possibilities across types of service systems and the forefront technologies that would allow them to achieve their apex of effectiveness and efficiency, but by no means are they intended to represent program emphases or priorities. **For more information, go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14610

Designing Materials to Revolutionize and Engineer our Future

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 29 2015
Expected Number of Awards: 25
Estimated Total Program Funding: $22,000,000
Eligibility: Proposals may only be submitted by the following: -Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.
CFDA Number: 47.041 -- Engineering Grants; 47.049 -- Mathematical and Physical Sciences; 47.070 -- Computer and Information Science and Engineering
Funding Opportunity Number: 14-591
DMREF is the primary program by which NSF participates in the Materials Genome Initiative (MGI) for Global Competitiveness. MGI recognizes the importance of materials science to the well-being and advancement of society and aims to "deploy advanced materials at least twice as fast as possible today, at a fraction of the cost." DMREF integrates materials discovery, development, property optimization, and systems design and optimization, with each employing a toolset to be developed within a materials innovation infrastructure. The toolset will synergistically integrate advanced computational methods and visual analytics with data-enabled

scientific discovery and innovative experimental techniques to revolutionize our approach to materials science and engineering. Accordingly, DMREF will support activities that accelerate materials discovery and development by building the fundamental knowledge base needed to design and make materials with specific and desired functions or properties from first principles. This will be accomplished by understanding the interrelationships of composition, structure, properties, processing, and performance. Achieving this goal will involve modeling, analysis, and computational simulations, validated and verified through sample preparation, characterization, and device demonstration. It will require new data analytic tools and statistical algorithms; advanced simulations of material properties in conjunction with new device functionality; advances in predictive modeling that leverage machine learning, data mining, and sparse approximation; data infrastructure that is accessible, extensible, scalable, and sustainable; the development, maintenance, and deployment of reliable, interoperable, and reusable software for the next-generation design of materials; and new collaborative capabilities for managing large, complex, heterogeneous, distributed data supporting materials design, synthesis, and longitudinal study. The multidisciplinary character of this effort dictates the involvement of programs in the NSF Directorates of Mathematical and Physical Sciences, Engineering, and Computer and Information Science and Engineering. Three or four year awards totaling $500,000 – 1,500,000 for the award period are anticipated. To cover the breadth of this endeavor, it is expected that proposed projects will be directed by a team of at least two Senior Personnel with complementary expertise. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14591

Methodology, Measurement, and Statistics

Granting Agency: National Science Foundation
Current Closing Date for Applications: Jan, 29 2015
Expected Number of Awards: 35
Estimated Total Program Funding: $3,4 00,000
Eligibility: Proposals may only be submitted by the following: - Doctoral Dissertation Research Improvement Awards: Ph.D. granting universities and colleges accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions. For all other types of awards, see the Grant Proposal Guide, Chapter I, Section E. for categories ofproposers eligible to submit proposals to NSF. Please see opportunity for further information.
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: 14-574
The Methodology, Measurement, and Statistics (MMS) Program is an interdisciplinary program in the Directorate for Social, Behavioral, and Economic Sciences that supports the development of innovative, analytical, and statistical methods and models for those sciences. MMS seeks proposals that are methodologically innovative, grounded in theory, and have potential utility for multiple fields within the social and behavioral sciences.?? As part of its larger portfolio, the MMS Program partners with a consortium of federal statistical agencies to support research proposals that further the development of new and innovative approaches to surveys and to the analysis of survey data.The MMS Program provides support through a number of different funding mechanisms.?? The following mechanisms are addressed in this solicitation:Regular Research AwardsAwards for conferences, workshops, and community-development

activitiesDoctoral Dissertation Research Improvement (DDRI) GrantsResearch Experience for Undergraduates (REU) SupplementsMMS also supports Faculty Early Career Development (CAREER) awards.?? Please see the CAREER Program Web Site for more information??about this activity. **For more information, go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14574

2014 Broad Agency Announcement

Granting Agency: Engineer Research and Development Center
Current Closing Date for Applications: Jan, 31 2015
Eligibility: Unrestricted
CFDA Number: 12.630 -- Basic, Applied, and Advanced Research in Science and
Funding Opportunity Number: W912HZ-14-BAA-01
The U.S. Army Engineer Research and Development Center (ERDC) has issued a Broad Agency Announcement (BAA) for various research and development topic areas. The ERDC consists of the Coastal and Hydraulics Lab (CHL), the Geotechnical and Structures Lab (GSL), the Environmental Lab (EL) and the Information Technology Lab (ITL) in Vicksburg, Mississippi; the Cold Regions Research and Engineering Lab (CRREL) in Hanover, New Hampshire; the Construction Engineering Research Lab (CERL) in Champaign, Illinois; and the Topographic Engineering Center (TEC) in Alexandria, Virginia. The ERDC is responsible for conducting research in the broad fields of hydraulics, dredging, coastal engineering, instrumentation, oceanography, remote sensing, geotechnical engineering, earthquake engineering, soil effects, vehicle mobility, self-contained munitions, military engineering, geophysics, pavements, protective structures, aquatic plants, water quality, dredged material, treatment of hazardous waste, wetlands, physical/mechanical/ chemical properties of snow and other frozen precipitation, infrastructure and environmental issues for installations, computer science, telecommunications management, energy, facilities maintenance, materials and structures, engineering processes, environmental processes, land and heritage conservation, and ecological processes. The BAA is available at http://erdc.usace.army.mil/ and is open until superseded. Proposals may be accepted at any time. For questions regarding proposals to CHL, EL, GSL, TEC & ITL, contact Derek Howard at 601-634-3310 or via email at Derek.A.Howard@usace.army.mil. For questions concerning proposals to CERL, contact Wanda Huber at 217-373-6730 or via email at wanda.l.huber@usace.army.mil or Andrea Krouse at 217-373-6746 or via email at andrea.j.krouse@usace.army.mil. For questions concerning proposals to CRREL, contact Wendy Adams at 603-646-4323 or via email at Wendy.A.Adams@usace.army.mil. Contact the technical personnel listed at the end of each topic area for questions concerning the topic areas themselves.

Science, Technology, Engineering

Granting Agency: Engineer Research and Development Center
Current Closing Date for Applications: Jan, 31 2015
Eligibility: Private institutions of higher education; Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education; Small businesses; For profit organizations other than small businesses; Public and State controlled institutions of higher education
CFDA Number: 12.630 -- Basic, Applied, and Advanced Research in Science and

Funding Opportunity Number: W912HZ-14-BAA-1000
The U.S. Army Engineer Research and Development Center (ERDC) seeks proposals under authority of the National Defense Education Act (1959) and under the Pre-Engineering Program (PEP) to stimulate young pupils in the sciences, technology, engineering and mathematics (STEM).

Software, Infrastructure for Sustained Innovation – SSE & SSI

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb, 2 2015
Eligibility: Proposals may only be submitted by the following: -Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities. -Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.
CFDA Number: 47.041 -- Engineering Grants; 47.049 -- Mathematical and Physical Sciences; 47.050 – Geosciences; 47.070 -- Computer and Information Science and Engineering; 47.074 -- Biological Sciences; 47.075 -- Social, Behavioral, and Economic Sciences; 47.076 -- Education and Human Resources
Funding Opportunity Number: 14-520
The goal of the SI2 program is to create a software ecosystem that includes all levels of the software stack and scales from individual or small groups of software innovators to large hubs of software excellence. The program addresses all aspects of cyberinfrastructure, from embedded sensor systems and instruments, to desktops and high-end data and computing systems, to major instruments and facilities. Furthermore, it recognizes that integrated education activities will play a key role in sustaining the cyberinfrastructure over time and in developing a workforce capable of fully realizing its potential in transforming science and engineering.The SI2 program includes three classes of awards:1. Scientific Software Elements (SSE): SSE awards target small groups that will create and deploy robust software elements for which there is a demonstrated need that will advance one or more significant areas of science and engineering. 2. Scientific Software Integration (SSI): SSI awards target larger, interdisciplinary teams organized around the development and application of common software infrastructure aimed at solving common research problems faced by NSF researchers in one or more areas of science and engineering. SSI awards will result in a sustainable community software framework serving a diverse community or communities.3. Scientific Software Innovation Institutes (S2I2): S2I2 awards will focus on the establishment of long-term hubs of excellence in software infrastructure and technologies, which will serve a research community of substantial size and disciplinary breadth. This solicitation includes SSE and SSI classes of awards only. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14520

Perception, Action & Cognition

Granting Agency: National Science Foundation

Current Closing Date for Applications: Feb 2, 2015
Eligibility: Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: PD-09-7252
Supports research on perception, action and cognition including the development of these capacities. Emphasis is on research strongly grounded in theory. Research topics include vision, audition, haptics, attention, memory, reasoning, written and spoken discourse, motor control, and developmental issues in all topic areas. The program encompasses a wide range of theoretical perspectives, such as symbolic computation, connectionism, ecological, nonlinear dynamics, and complex systems, and a variety of methodologies including both experimental studies and modeling. Research involving acquired or developmental deficits is appropriate if the results speak to basic issues of perception, action, and cognition. **For more information, go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5686

Science of Organizations

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 2, 2015
Expected Number of Awards: 20
Estimated Total Program Funding: $3,270,000
Eligibility Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: PD-11-8031
Organizations -- private and public, established and entrepreneurial, designed and emergent, formal and informal, profit and nonprofit -- are critical to the well-being of nations and their citizens. They are of crucial importance for producing goods and services, creating value, providing jobs, and achieving social goals. The Science of Organizations (SoO) program funds basic research that yields a scientific evidence base for improving the design and emergence, development and deployment, and management and ultimate effectiveness of organizations of all kinds. SoO funds research that advances our fundamental understanding of how organizations develop, form and operate. Successful SoO research proposals use scientific methods to develop and refine theories, to empirically test theories and frameworks, and to develop new measures and methods. Funded research is aimed at yielding generalizable insights that are of value to the business practitioner, policy-maker and research communities. SoO welcomes any and all rigorous, scientific approaches that illuminate aspects of organizations as systems of coordination, management and governance. In considering whether a particular project might be a candidate for consideration by SoO, please note: Intellectual perspectives may involve (but are not limited to) organizational theory, behavior, sociology or economics, business policy and strategy, communication sciences, entrepreneurship, human resource management, information sciences, managerial and organizational cognition, operations management, public administration, social or industrial psychology, and technology and innovation management. Phenomena studied may include (but are not limited to) structures, routines, effectiveness, competitiveness, innovation, dynamics, change and evolution.Levels of analysis may include (but are not limited to) organizational, cross-organizational collaborations or relationships, and institutional and can address individuals, groups or teams.Research methods may be qualitative and quantitative and may include (but are not limited to) archival analyses, surveys, simulation

studies, experiments, comparative case studies, and network analyses. Consistent with NSF merit review criteria, each SoO proposal should discuss both the intellectual merit and the potential broader impacts of the proposed research. SoO values basic research that has the potential to provide broader societal benefits. However, the majority of space in any proposal will need to be dedicated to the explication of theory, methods, and specific contribution to the evidence base about organizational effectiveness.Projects that aim to implement and subsequently evaluate particular organizational training, effectiveness or change programs, rather than to advance fundamental, generalizable knowledge, are not appropriate for SoO.Researchers who seek to conduct SoO-appropriate research in an industrial site and/or via an industry-university collaboration are invited to also look at the Grant Opportunities for Academic Liaisons with Industry(GOALI) program web site. **For more information, go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504696

Science, Technology, and Society

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 2, 2015
Expected Number of Awards: 40
Estimated Total Program Funding: $6,200,000
Eligibility: Proposals may only be submitted by the following: - Organization limit varies by the mode of support:< ul>< li>Standard Research Grants and Grants for Collaborative Research: US Academic Institutions and Non-Profit Research Organizations.
< li>Scholars Awards and Postdoctoral Fellowships: US Academic Institutions and Independent Scholars.
< li>Doctoral Dissertation Research Improvement Grants: US Academic Institutions.
< li>Conference and Workshop Support: No limitations. See NSF's Proposals and Awards Policies and Procedures Guide (PAPPG), ChapterI, Section Efor categories of proposers eligible to submit proposals to NSF.
< /ul> See Section II. Program Description for detailed information about each mode of support. *Who May Serve as PI: PI eligibility limit varies by the mode of support. See Section II. Program Description for detailed information about each mode of support.
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences93.855 -- Allergy, Immunology and Transplantation Research; 93.856 -- Microbiology and Infectious Diseases Research
Funding Opportunity Number: 15-506
The Science, Technology, and Society (STS) program supports research that uses historical, philosophical, and social scientific methods to investigate the intellectual, material, and social facets of the scientific, technological, engineering and mathematical (STEM) disciplines. It encompasses a broad spectrum of STS topics including interdisciplinary studies of ethics, equity, governance, and policy issues that are closely related to STEM disciplines, including medical science. The program’s review process is approximately six months. It includes appraisal of proposals by ad hoc reviewers selected for their expertise and by an advisory panel that meets twice a year. The deadlines for the submission of proposals are February 2nd for proposals to be funded as early as July, and August 3rd for proposals to be funded in or after January. There is one exception: Doctoral Dissertation Improvement Grant proposals will have only one deadline per year, August 3rd. The Program encourages potential investigators with questions as to

whether their proposal fits the goals of the program to contact one of the program officers. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15506

EHR Core Research (ECR)

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 3, 2015
Expected Number of Awards: 28
Estimated Total Program Funding: $20,000,000
Eligibility: Unrestricted
CFDA Number: 47.076 -- Education and Human Resources
Funding Opportunity Number: 13-555
The EHR Core Research (ECR) program establishes a mechanism in the Directorate for Education and Human Resources to provide funding in foundational research areas that are broad, essential and enduring. EHR seeks proposals that will help synthesize, build and/or expand research foundations in the following core areas: STEM learning, STEM learning environments, workforce development, and broadening participation in STEM. We invite researchers to identify and conduct research on questions or issues in order to advance the improvement of STEM learning in general, or to address specific challenges of great importance. Two types of proposals are invited: Core Research Proposals (maximum 5 years, $1.5 million) that propose to study a foundational research question/issue designed to inform the transformation of STEM learning and education and Capacity Building Proposals (maximum 3 years, $300,000) intended to support groundwork necessary for advancing research within the four core areas. **For more information, go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf13555

Cyber-Innovation for Sustainability Science and Engineering

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 3, 2015
Expected Number of Awards: 25
Estimated Total Program Funding: $10,500,000
Eligibility: Who May Serve as PI: Due to this program's focus on interdisciplinary, collaborative research, a minimum of two collaborating investigators (PIs/Co-PIs) working in different disciplines is required. Applicants are urged to review the interdisciplinary, collaborative expectations of this program - described in the Program Description and Merit Review Criteria - which must be reflected in the project plans and project teams of all competitive proposals.
CFDA Number: 47.041 -- Engineering Grants; 47.049 -- Mathematical and Physical Sciences; 47.050 – Geosciences; 47.070 -- Computer and Information Science and Engineering; 47.074 -- Biological Sciences; 47.076 -- Education and Human Resources
Funding Opportunity Number: 14-531
The Cyber-Innovation for Sustainability Science and Engineering (CyberSEES) program aims to advance interdisciplinary research in which the science and engineering of sustainability are enabled by new advances in computing, and where computational innovation is grounded in the

context of sustainability problems.The CyberSEES program is one component of the National Science Foundation's Science, Engineering, and Education for Sustainability (SEES) activities, a Foundation-wide effort aimed at addressing the challenge of sustainability through support for interdisciplinary research and education. In the SEES context, a sustainable world is one where human needs are met equitably without harm to the environment or sacrificing the ability of future generations to meet their own needs.Computational approaches play a central role in understanding and advancing sustainability. CyberSEES supports research on all sustainability topics that depend on advances in computational areas including optimization, modeling, simulation, prediction, and inference; large-scale data management and analytics; advanced sensing techniques; human computer interaction and social computing; infrastructure design, control and management; and intelligent systems and decision-making. Additionally, the widespread, intensive use of computing technologies also introduces sustainability challenges and motivates new approaches across the lifecycle of technology design and use. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14531

EHR Core Research

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 3, 2015
Expected Number of Awards: 64
Estimated Total Program Funding: $61,500,000
Eligibility: Unrestricted
CFDA Number: 47.076 -- Education and Human Resources
Funding Opportunity Number: 15-509
The EHR Core Research (ECR) program of fundamental research in STEM education provides funding in critical research areas that are essential, broad and enduring. EHR seeks proposals that will help synthesize, build and/or expand research foundations in the following focal areas: STEM learning, STEM learning environments, STEM workforce development, and broadening participation in STEM. The ECR program is distinguished by its emphasis on the accumulation of robust evidence to inform efforts to (a) understand, (b) build theory to explain, and (c) suggest interventions (and innovations) to address persistent challenges in STEM interest, education, learning, and participation. The program supports advances in fundamental research on STEM learning and education by fostering efforts to develop foundational knowledge in STEM learning and learning contexts, both formal and informal, from childhood through adulthood, for all groups, and from the earliest developmental stages of life through participation in the workforce, resulting in increased public understanding of science and engineering. The ECR program will fund fundamental research on: human learning in STEM; learning in STEM learning environments, STEM workforce development, and research on broadening participation in STEM. **For more information, go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15509

Accelerator Science

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 4, 2015
Eligibility: Unrestricted

CFDA Number: 47.049 -- Mathematical and Physical Sciences
Funding Opportunity Number: PD-14-7243
Apply to NSF 14-576 Particle accelerator systems have been key drivers for a broad array of fundamental discoveries and transformational scientific advances since the early 20th century. Since their inception, they have also been core components of U.S. technological innovation and economic competitiveness. The Accelerator Science program will support and foster research at universities that exploits the educational and discovery potential of basic accelerator physics research, and allows the development of transformational discoveries in this crosscutting academic discipline. In particular, this program seeks to support research with the potential to disrupt existing paradigms and advance accelerator science at a fundamental level, such as enabling discoveries that lead to novel, compact, powerful, and/or cost-effective accelerators. Key questions that this program will address include: what are the fundamental limitations affecting the acceleration, control, intensity, and quality of particle beams? What novel approaches can be employed to substantially increase accelerating gradients? How can developments in other fields lead to new approaches in accelerator science and beam physics? The goal of this program is to seed and support fundamental accelerator science at universities as an academic discipline, providing the foundation in knowledge and workforce upon which major advances in accelerator-driven technologies will be based. An important component of the program will be the support and training of the next generation of accelerator scientists, including students, postdoctoral researchers, and junior faculty, who will lead innovations in the field and will form the backbone of the nation's highly trained accelerator workforce. Proposals for experimental, theoretical, and/or simulation-based research are welcome. Priority will be given to those proposals that enable the discovery science supported by the MPS Division of Physics. ------ The Physics Division has replaced its annual Dear Colleague Letter (the most recent version was NSF 12-068) with a solicitation: Division of Physics: Investigator-Initiated Research Projects (NSF 14-576). The solicitation follows most of the requirements in the Grant Proposal Guide, but has additional requirements that relate primarily to proposers who anticipate having multiple sources of support, and proposals involving significant instrumentation development. The solicitation also has deadlines instead of target dates. All proposals submitted to the Physics Division that are not governed by another solicitation (such as CAREER) should be submitted to this solicitation; otherwise they will be returned without review.
For more information, go to: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504937

Ocean Technology and Interdisciplinary Coordination

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 15, 2015
Eligibility Unrestricted
CFDA Number: 47.050 -- Geosciences

Funding Opportunity Number: PD-98-1680
The Oceanographic Technology and Interdisciplinary Coordination (OTIC) Program supports a broad range of research and technology development activities. Unsolicited proposals are accepted for instrumentation development that has broad applicability to ocean science research projects and that enhance observational, experimental or analytical capabilities of the ocean

science research community. Specific announcements for funding opportunities are made for additional projects involving Improvements in Facilities, Communications, and Equipment at Biological Field Stations and Marine Laboratories (FSML) and the National Ocean Partnership Program. **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12724

Marine Geology and Geophysics

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 15, 2015
Eligibility Unrestricted
CFDA Number: 47.050 -- Geosciences
Funding Opportunity Number: PD-98-1620
The Marine Geology and Geophysics program supports research on all aspects of geology and geophysics of the ocean basins and margins, as well as the Great Lakes.The Program includes:Structure, tectonic evolution and volcanic activity of the ocean basins, the continental margins, the mid-ocean ridges, and island arc systemsProcesses controlling exchange of heat and chemical species between seawater and ocean rocksGenesis, chemistry, and mineralogic evolution of marine sedimentsProcesses controlling deposition, erosion and transport of marine sedimentsPast ocean circulation patterns and climates andInteractions of continental and marine geologic processes. **For more information:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11726

Biological Oceanography

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 15, 2015
Eligibility Unrestricted
CFDA Number: 47.050 -- Geosciences
Funding Opportunity Number: PD-98-1650
The Biological Oceanography Program supports research in marine ecology broadly defined: relationships among aquatic organisms and their interactions with the environments of the oceans or Great Lakes. Projects submitted to the program for consideration are often interdisciplinary efforts that may include participation by other OCE Programs. (See information provided under Related URLs below). **For more information:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11696

Physical Oceanography

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 15, 2015
Eligibility Unrestricted
CFDA Number: 47.050 -- Geosciences
Funding Opportunity Number: PD-98-1610
The Physical Oceanography Program supports research on a wide range of topics associated with the structure and movement of the ocean, with the way in which it transports various quantities, with the way the ocean's physical structure interacts with the biological and chemical processes

within it, and with interactions between the ocean and the atmosphere, solid earth and ice that surround it. **For more information**:
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12729

Cultivating Cultures for Ethical STEM

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Expected Number of Awards: 8
Estimated Total Program Funding: $3,050,000
Eligibility Proposals may only be submitted by the following: -Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions. - Other types of organizations can be included only as non-lead collaborators or sub-awardees. In addition, accredited U.S. colleges and universities and U.S. professional associations can be non-lead collaborators or sub-awardees. *Who May Serve as PI:NSF expects project teams to include persons with appropriate expertise. This might include expertise in the domain or domains of science or engineering on which the project focuses, in ethics, values, evaluation, and pedagogy.
CFDA Number: 47.041 -- Engineering Grants; 47.049 -- Mathematical and Physical Sciences; 47.050 – Geosciences; 47.070 -- Computer and Information Science and Engineering; 47.074 -- Biological Sciences; 47.075 -- Social, Behavioral, and Economic Sciences; 47.076 -- Education and Human Resources; 47.079 -- Office of International and Integrative Activities
Funding Opportunity Number: 14-546
Cultivating Cultures for Ethical STEM (CCE STEM) funds research projects that identify factors that are effacacious in the formation of ethical STEM researchers in all the fields of science and engineering that NSF supports. CCE STEM solicits proposals for research that explores the following: ‘What constitutes ethical STEM research and practice? Which cultural and institutional contexts promote ethical STEM research and practice and why?' Factors one might consider include: honor codes, professional ethics codes and licensing requirements, an ethic of service and/or service learning, life-long learning requirements, curricula or memberships in organizations (e.g. Engineers without Borders) that stress social responsibility and humanitarian goals, institutions that serve under-represented groups, institutions where academic and research integrity are cultivated at multiple levels, institutions that cultivate ethics across the curriculum, or programs that promote group work, or do not grade. Do certain labs have a ‘culture of academic integrity'? What practices contribute to the establishment and maintenance of ethical cultures and how can these practices be transferred, extended to, and integrated into other research and learning settings?Successful proposals will include a comparative dimension, either between or within institutional settings that differ along these or other factors.CCE STEM research projects will use basic research to produce knowledge about what constitutes responsible or irresponsible, just or unjust scientific practices and sociotechnical systems, and how to best instill students with this knowledge.Proposals for awards from minority-serving institutions (e.g. Tribal Colleges and Universities, Historically Black Colleges and Universities, Hispanic-Serving Institutions, Alaska Native or Native Hawaiian Serving Institutions), women's colleges, and institutions primarily serving persons with disabilities are strongly encouraged.
For more information: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14546

Biological Robustness in Complex Settlings (BRICS)

Granting Agency: DARPA - Biological Technologies Office
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 12.910 -- Research and Technology Development
Funding Opportunity Number: DARPA-BAA-14-49
DARPA is soliciting innovative research proposals to develop the necessary fundamental understanding and component technologies to create robust engineered biological systems
For more information: https://www.fbo.gov/spg/ODA/DARPA/CMO/DARPA-BAA-14-49/listing.html

Nonmanufacturing

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Estimated Total Program Funding:$300,000
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-14-1788
Nanomanufacturing is the production of useful nano-scale materials, structures, devices and systems in an economically viable manner. The NSF Nanomanufacturing Program supports fundamental research in novel methods and techniques for batch and continuous processes, top-down (addition/subtraction) and bottom-up (directed self-assembly) processes leading to the formation of complex heterogeneous nanosystems. The program supports basic research in nanostructure and process design principles, integration across length-scales, and system-level integration. The Program leverages advances in the understanding of nano-scale phenomena and processes (physical, chemical, electrical, thermal, mechanical and biological), nanomaterials discovery, novel nanostructure architectures, and new nanodevice and nanosystem concepts. It seeks to address quality, efficiency, scalability, reliability, safety and affordability issues that are relevant to manufacturing. To address these issues, the Program encourages research on processes and production systems based on computation, modeling and simulation, use of process metrology, sensing, monitoring, and control, and assessment of product (nanomaterial, nanostructure, nanodevice or nanosystem) quality and performance.The Program seeks to explore transformative approaches to nanomanufacturing, including but not limited to: micro-reactor and micro-fluidics enabled nanosynthesis, bio-inspired nanomanufacturing, manufacturing by nanomachines, additive nanomanufacturing, hierarchical nanostructure assembly, continuous high-rate nanofabrication such as roll-to-roll processing or massively-parallel large-area processing, and modular manufacturing platforms for nanosystems. The Program encourages the fabrication of nanomaterials by design, three-dimensional nanostructures, multi-layer nanodevices, and multi-material and multi-functional nanosystems. Also of interest is the manufacture of dynamic nanosystems such as nanomotors, nanorobots, and nanomachines, and enabling advances in transport and diffusion mechanisms at the nano-scale.

The program supports education of the next generation of researchers, and encourages building a workforce trained in nanomanufacturing systems. It is also interested in understanding long-term environmental, health and societal (EHS) implications of large-scale production and use of nano-scale materials, devices and systems. Individual and small group proposals are encouraged to partner with industry and government sponsored laboratories. Proposers are referred to NSF GOALI program for collaborative efforts with industry. NSF contributes fundamental research in support of the NNI's Signature Initiative on Sustainable Nanomanufacturing (available on http://www.nano.gov/).The Nanomanufacturing Program does not support research that focuses on synthesis and characterization of nanomaterials and nanostructures, or the processing, compounding, and manufacture of nanomaterials and nanostructures in bulk quantities. Proposals in these areas should be directed to the appropriate NSF program. **For more information**: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13347

Materials Engineering and Processing

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-13-8092
The Materials Engineering and Processing (MEP) program supports fundamental research addressing the interrelationship of materials processing, structure, properties and/or life-cycle performance for targeted applications. Research proposals should be driven by the performance or output of the material system relative to the targeted application(s). Research plans driven by scientific hypotheses are encouraged when suitable. Materials in bulk form or focus on special zones such as surfaces or interfaces that are to be used in structural and/or functional applications are appropriate. All material systems are of interest including polymers, metals, ceramics, semiconductors, composites and hybrids thereof. Analytical, experimental, and numerical studies are supported and collaborative proposals with industry (GOALI) are encouraged.Areas of interest include: Functional Materials - materials that possess native properties and functions that can be controlled by external forces such as temperature, light, electric field, pH, etc. These include materials that exhibit properties such as electronic, magnetic, piezoelectric, ferroelectric, photovoltaic, chromogenic, shape memory, thermoelectric or self-healing, etc. Structural Materials - materials that, in service, bear mechanical load. Length scales from nano to meso to macro are of interest as are materials in the bulk or in special configuration such as thin film. These include materials such as metals, polymers, composites, biomaterials, ceramics, hybrids, cement, etc. Materials Processing - processes that convert material into useful form as either intermediate or final composition. These include processes such as extrusion, molding, casting, deposition, sintering, printing, etc. Proposed research should include the consideration of cost, performance, and feasibility of scale-up, as appropriate. Research that addresses multi-scale and/or multi-functional materials systems is encouraged as is research in support of environmentally-benign manufacturing. **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504950

Mechanics of Materials

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Estimated Number of Awards: 20
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-14-1630
The Mechanics of Materials program supports fundamental research on the behavior of solid materials and respective devices under external actions.?? A diverse and interdisciplinary spectrum of research is supported with emphasis placed on fundamental understanding that i) advances theory, experimental, and/or computational methods in Mechanics of Materials, and/or ii) uses contemporary Mechanics of Materials methods to address modern challenges in material and device mechanics and physics. Proposed research can focus on existing or emerging material systems across time and length scales. Intellectual merit typically includes advances in fundamental understanding of deformation, fracture, fatigue, and contact through constitutive modeling, multiscale and multiphysics analysis, computational methods, or experimental techniques.??Recent interests comprise, but are not limited to:?? contemporary materials including multiphase materials and material systems, soft materials, active materials, low-dimensional materials, phononic/elastic metamaterials, friction, wear;??multiphysics methods, mechanics at the nano, meso and microscale and multiscale integration thereof, as well as approaches incorporating fundamental understanding of physics and chemistry into the continuum-level understanding of the response characteristics of materials and material systems.Broader impacts include, but are not limited to: advancing the relevant application of Mechanics of Materials to problems in new technological domains and engineering practice; increasing awareness of the importance and role of Mechanics of Materials in other scientific communities as well as society in general; impacting graduate education in Mechanics of Materials across the US; strengthening undergraduate and K-12 education in and exposure to Mechanics of Materials; and engaging and encouraging the participation of groups traditionally underrepresented in STEM fields.Proposers who wish to discuss their proposed research related to the Mechanics of Materials program should discuss it with the Program Director after sending a one-page white paper by email.?? **For more information**:
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13355

Hazard Mitigation and Structural Engineering

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-13-1637
The Hazard Mitigation and Structural Engineering (HMSE) program supports fundamental research to mitigate impacts of natural and anthropogenic hazards on civil infrastructure and to advance the reliability, resiliency, and sustainability of buildings and other structures. Hazards considered within the program include earthquake, tsunami, hurricane, tornado and other loads, as well as explosive and impact loading. Resiliency of buildings and other structures include

structural and non-structural systems that, in totality, permit continued occupation or operation in case of an impact by a hazard. Research is encouraged that integrates structural and architectural engineering advances with discoveries in other science and engineering fields, such as earth and atmospheric sciences, material science, mechanics of materials, sensor technology, high performance computational modeling and simulation, dynamic system and control, and economics. The program seeks to fund transformative and cost-effective innovations for hazard mitigation of both new and rehabilitated buildings and other structures. Research in structural and architectural engineering is encouraged that extends beyond mature or current construction materials into investigations of smart and sustainable materials and technologies, and considers the structures in their entirety. In addition, the program funds research on structural health monitoring that goes beyond data acquisition to include the holistic system, integrating condition assessment and decision making tools to improve structural performance **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13358

Manufacturing Machines and Equipment

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Estimated Total Program Funding: $300,000
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-14-1468
The MME program supports fundamental research leading to improved manufacturing machines and equipment, and their application in manufacturing processes. Key goals of the program are to advance the transition of manufacturing from skill-based to knowledge-based activities, and to advance technologies that will enable the manufacturing sector to reduce its environmental impacts. A focus is on the advancement of manufacturing machines and related systems engineering that will enable energy manufacturing, namely the manufacture of facilities and equipment that will enable the conversion of renewable resources into energy products such as electricity and liquid fuels, on a large scale. The program also supports research on additive manufacturing, laser processing and bonding/joining processes encompassing feature scales from microns to meters. Proposals with focus on materials for these processes are also welcome in MME. Note: nanometer scale additive manufacturing is supported under the Nanomanufacturing program.Investigators wishing to serve on a proposal review panel should email the Program Director with a short biographical sketch, a list of areas of expertise and a link to their home page. REU/RET supplement requests should be submitted by March 31 each year. **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13346

Manufacturing Enterprise Systems

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-13-1786

The MES program supports research on design, planning, and control of operations in manufacturing enterprises. Research is supported that is both grounded in an interesting and relevant application and requires the development of novel analytical and computational methodologies that may be of broader interest. Topics of interest include supply chain optimization and management; production planning and scheduling; monitoring and control of manufacturing processes; and maintenance and repair. Of particular interest are methods that incorporate increasingly rich enterprise process and product information and models, methods that address sustainability, and methods that incorporate characteristic uncertainty and risk. **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13342

Design of Engineering Material Systems

Granting **Agency:** National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Expected Number of Awards: 15
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-12-8086
The Design of Engineering Material Systems (DEMS) program supports fundamental research intended to lead to new paradigms of design, development, and insertion of advanced engineering material systems. Fundamental research that develops and creatively integrates theory, processing/manufacturing, data/informatics, experimental, and/or computational approaches with rigorous engineering design principles, approaches, and tools to enable the accelerated design and development of materials is welcome. Research proposals are sought that strive to develop systematic scientific methodologies to tailor the behavior of material systems in ways that are driven by performance metrics and incorporate processing/manufacturing. While an emphasis on a specific material system may be appropriate to provide the necessary project focus, techniques developed should transcend materials systems. Ultimately it is expected that research outcomes will be methodologies to enable the discovery of materials systems with new properties and behavior, and enable their rapid insertion into engineering systems.Proposals that focus on modeling, simulation, and prediction of material performance (even when research is coupled with experiments for validation or guidance) without an intellectual emphasis on design are not appropriate for this program and should be submitted to other disciplinary programs.
For more information: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504809

Engineering and Systems Design

G**ranting Agency:** National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-13-1464
The Engineering and Systems Design (ESD) program supports descriptive and normative research leading to a theory of engineering design and an understanding of systems engineering. The program is focused on gaining an understanding of the basic processes and phenomena underlying a view of design where the system life-cycle context informs the identification and

definition of preferences, analysis of alternatives, effective accommodation of uncertainty in decision-making, and the relationship between data, information, and knowledge in a digitally-supported environment. The program funds advances in a descriptive understanding of design and basic design theory that span multiple domains, such as the relationship of systems to the environment, the significance of manufacturability, and the range of complexity from small designed artifacts to large engineered systems.   Fundamental research in system science and system engineering theory should be submitted to the System Science (SYS) program. Research in which the primary contribution is observation and description of systems engineering should be submitted to the ESD program, and should identify the System Science program as a secondary program. **For more information**:
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13340

Geotechnical Engineering

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-12-1636
The GTE program supports fundamental research on geotechnical engineering aspects of civil infrastructure, such as site characterization, foundations, earth retaining systems, underground construction, excavations, tunneling, and drilling. Also included in the program scope is research on geoenvironmental engineering; geotechnical engineering aspects of geothermal energy; life-cycle analysis of geostructures; geotechnical earthquake engineering that does not involve the use of George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES) facilities; scour and erosion; and geohazards such as tsunamis, landslides, mudslides and debris flows. The program does not support research related to natural resource exploration or recovery. Emphasis is on issues of sustainability and resilience of civil infrastructure. Cross-disciplinary and international collaborations are encouraged. **For more information**:
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13351

Systems Science

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Expected Number of Awards: 15
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-12-8085
The System Science (SYS) program funds fundamental research on engineered systems that will support the creation of a mathematically sound framework for systems engineering. The System Science program invites proposals that address fundamental systems issues including system performance prediction, uncertainty quantification in the systems context, theoretical foundations for aggregation in systems, decision-making in the systems context, and operation and maintenance in the systems context.   The System Science program does not fund development projects. Proposals that have system science or system engineering relevance,

but for which the predominant research contribution is within an existing program in CMMI, should be submitted to the appropriate disciplinary program, with the System Science program identified as a secondary program. **For more information**:
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504788

Geomechanics & Geomaterials

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Expected Number of Awards: 20
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-12-1634
The GEOMM program supports fundamental research on the mechanical and engineering properties of geologic materials including natural, mechanically stabilized, and biologically or chemically modified soil and rock. The program also addresses hydraulic, biological, chemical and thermal processes that affect the behavior of geologic materials. Research at the micro-scale on soil-structure interaction and liquefaction are included in the scope of this program. Support is provided for theoretical studies, constitutive and numerical modeling, laboratory, centrifuge, and field testing. Cross-disciplinary and international collaborations are encouraged. **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13350

Civil Infrastructure Systems

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-12-1631
The Civil Infrastructure Systems (CIS) program supports research leading to the engineering of infrastructure systems for resilience and sustainability without excluding other key performance issues. Areas of interest include intra- and inter-physical, information and behavioral dependencies of infrastructure systems, infrastructure management, construction engineering, and transportation systems. Special emphasis is on the design, construction, operation, and improvement of infrastructure networks with a focus on systems engineering and design, performance management, risk analysis, life-cycle analysis, modeling and simulation, behavioral and social considerations not excluding other methodological areas or the integration of methods.This program does not encourage research proposals primarily focused on structural engineering, materials or sensors that support infrastructure system design, extreme event modeling, hydrological engineering, and climate modeling, since they do not fall within the scope of the CIS program. Researchers focused in these areas are encouraged to contact the Infrastructure Management and Extreme Events (IMEE), Geotechnical Engineering (GTE), Hazard Mitigation and Structural Engineering (HSME), Structural Materials and Mechanics (SMM), or the Sensors and Sensing Systems (SSS) program within CMMI. Additionally, researchers may consider contacting the Hydrologic Sciences program in the Earth Sciences Division (EAR) or the Physical and Dynamic Meteorology (PDM) program in the Atmospheric

and Geospace Sciences Division (AGS) of the Directorate for Geosciences. **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13352

Operations Research

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-10-5514
The OR program supports fundamental research leading to the creation of innovative mathematical models, analysis, and algorithms for optimal or near optimal decision-making, applicable to the design and operation of manufacturing, service, and other complex systems. In addition to the traditional areas of Operations Research which includes discrete and continuous optimization as well as stochastic modeling and analysis, new research thrusts include simulation optimization and self-optimizing systems that can observe, learn, and adapt to changing environments. **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13341

Service Enterprise Systems

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-10-1787
The SES program supports research on strategic decision making, design, planning, and operation of commercial, nonprofit, and institutional service enterprises with the goal of improving their overall effectiveness and cost reduction. The program has a particular focus on healthcare and other similar public service institutions, and emphasizes research topics leading to more effective systems modeling and analysis as a means to improved planning, resource allocation, and policy development. **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13343

Infrastructure Management and Extreme Events

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-10-1638
The IMEE program focuses on the impact of large-scale hazards on civil infrastructure and society and on related issues of preparedness, response, mitigation, and recovery.?? The program

supports research to integrate multiple issues from engineering, social, behavioral, political, and economic sciences. ??It supports fundamental research on the interdependence of civil infrastructure and society, development of sustainable infrastructures, and civil infrastructure vulnerability and risk reduction. **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13353

Sensors, Dynamics, and Control

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-14-7569
The Sensors, Dynamics, and Control (SDC) program supports fundamental research on the analysis, measurement, monitoring and control of complex dynamical and structural systems, including development of new analytical, computational and experimental tools, and novel applications to engineered and natural systems. Program objectives are the discovery of new phenomena and the investigation of innovative methods and applications for dynamics, measurement, and control. Transformative research on complex networks, linear and nonlinear discrete or infinite dimensional systems spanning a multitude of time and length scales and physical domains are of interest, as are highly interdisciplinary projects and projects addressing security, resilience and sustainability. Basic research strongly motivated by industry needs or other real-life applications is welcome.The SDC program supports fundamental research on the theories of dynamical systems to uncover novel paradigms for modeling, control and analysis of dynamic phenomena and systems that undergo spatial and temporal evolution with applications crossing interdisciplinary boundaries, along with fundamental studies on stability, phase transitions, and wave propagation in complex and non-local media. Furthermore, the program supports fundamental research on monitoring, analysis, and decision-making processes for integrity monitoring, sensors reliability and safety of complex engineered systems, especially under conditions of uncertainty. Of interest is the investigation of big data (high-volume and high-speed) issues related to virtually-continuous streams of measurements from heterogeneous sensors for continuous systems monitoring. The SDC program also includes fundamental research on control theory and its applications. Topics of current interest include unconventional applications of control; the combined roles of feedback, feedforward and uncertainty; integrated feedback, communication and signal processing; and control concepts inspired by nature..
For more information http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505099

Biomechanics and Mechanobiology

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-14-7479
The BMMB Program supports fundamental research in biomechanics and mechanobiology. An emphasis is placed on multiscale mechanics approaches in the study of organisms that integrate

across molecular, cell, tissue, and organ domains. The influence of in vivo mechanical forces on cell and matrix biology in the histomorphogenesis, maintenance, regeneration, and aging of tissues is an important concern. In addition, the relationships between mechanical behavior and extracellular matrix composition and organization are of interest. Funded projects may include theoretical, computational, and experimental approaches. The program encourages the consideration of diverse living tissues as smart materials that are self-designing. **For more information:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13523

Engineering and Systems Design

Granting **Agency:** National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-14-1464
The Engineering and Systems Design (ESD) program supports fundamental research leading to new engineering and systems design methods and practices for specific global contexts. In particular, ESD seeks intellectual advances in which the theoretical foundations underlying design and systems engineering are operationalized into rigorous and pragmatic methods for a specific context. In addition, the program funds the rigorous theoretical and empirical characterization of new or existing methods for design and systems engineering, identifying in which global contexts and under which assumptions these methods are effective and efficient. Such a global context includes both a domain (such as energy systems, consumer products, cyber-physical systems) and an economic, socio-political, environmental and technological context. Application of existing design methods or tools to new domains is out of scope. Research in ESD should advance the state of knowledge of design methodology, for instance, by adapting existing methods to a new context or by carefully characterizing existing or new design methods in a new context. Research focused on the theoretical foundation of design and systems engineering in a generic, domain-independent fashion should be submitted to the Systems Science program (SYS). Research topics of interest in ESD include, but are not limited to: Design for X, where X is either a specific domain (e.g., energy systems, consumer products, or additive manufacturing) or a specific concern (e.g., resilience, sustainability, usability, or manufacturability). **For more information, go to**:
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13340

Systems Science

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Eligibility Unrestricted
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: PD-14-8085
The Systems Science (SYS) program supports fundamental research leading to a theoretical foundation for design and systems engineering. In particular, the Systems Science program seeks intellectual advances in which underlying theories (such as probability theory, decision theory, game theory, organizational sociology, behavioral economics or cognitive psychology) are

integrated and abstracted to develop explanatory models for design and systems engineering in a general, domain-independent fashion. Ideally, the explanatory models, derived from the underlying theoretical foundations will lead to testable hypotheses. Based on collected evidence supporting or falsifying the hypotheses, new insights are gained allowing the explanatory models to be refined or updated. **For more information, go to**:
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504788

Partnerships for Innovation: Accelerating Innovation Research-Research Alliance

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 17, 2015
Expected Number of Awards: 8
Estimated Total Program Funding: $5,000,000
Eligibility Proposals may only be submitted by the following: - Academic institutions such as universities, two- and four-year colleges, and non-profits with a campus located in the US and accredited in the US, acting on behalf of their faculty members. The lead (submitting) organization must be an academic institution. One and only one institution within an NSF-funded research consortium can be the lead/submitting institution. An NSF-funded research consortium is defined as a research partnership between/among universities and other entities that is formed for mutual benefit and funded by the NSF. A research consortium is based on partnerships developed between faculty members, between faculty and industry, between faculty and federal laboratories, and/or between universities to conduct research on problems typically beyond the reach of a single investigator. In addition to having research results and technology ready for translation, an NSF-funded research consortium will have an established network of connections and relationships that can be leveraged to develop and sustain the PFI:AIR-RA innovation ecosystem. Examples of NSF research consortia include but are not limited to NSF centers, such as Engineering Research Centers, Industry University Cooperative Research Centers, Science and Technology Centers, Nanoscale Science and Engineering Centers, Materials Research Science and Engineering Centers, and Centers for Chemical Innovation. Other examples include, but are not limited to, large, multi-year, multi-faculty/institution awards such as CISE Expeditions in Computing, CISE Frontiers, and ENG Emerging Frontiers in Research and Innovation (EFRI). *Who May Serve as PI: A PI may submit only one proposal to this PFI:AIR-RA solicitation.
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: 14-612
The NSF Partnerships for Innovation (PFI) program within the Division of Industrial Innovation and Partnerships (IIP) is an umbrella for two complementary subprograms, Accelerating Innovation Research (AIR) and Building Innovation Capacity (BIC). Both programs are concerned with the movement of academic research discoveries into the marketplace, although each focuses on different stages along the innovation spectrum. The PFI:AIR program has two additional subprograms: the PFI:AIR-Technology Translation (See NSF 14-569) and PFI:AIR-Research Alliance (this solicitation). This PFI:AIR-Research Alliance (RA) solicitation is intended to accelerate the translation and transfer of existing research discoveries into competitive technologies and commercial realities by leveraging the investments NSF has made

in research consortia (e.g., Engineering Research Centers, Industry University Cooperative Research Centers, Science and Technology Centers, Nanoscale Science and Engineering Centers, Materials Research Science and Engineering Centers, Centers for Chemical Innovation, and others) and catalyzing academic-based innovation ecosystems. The goal is that these synergistic partnerships and collaborations between government, academia, and other public and private entities will result in new wealth and the building of strong local and regional economies. WEBINAR: A webinar will be held within 6 weeks of the release date of this solicitation to answer any questions about this solicitation. Details will be posted on the PFI:AIR-RA website (http://www.nsf.gov/eng/iip/pfi/air-ra.jsp) as they become available. **For more information, go to**: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14612

Cognitive Neuroscience

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 25, 2015
Expected Number of Awards: 25
Estimated Total Program Funding: $8,000,000
Eligibility Unrestricted
CFDA Number: 47.075 -- Social, Behavioral, and Economic Sciences
Funding Opportunity Number: 14-514
The Cognitive Neuroscience Program seeks highly innovative and interdisciplinary proposals aimed at advancing a rigorous understanding of how the human brain supports thought, perception, affect, action, social processes, and other aspects of cognition and behavior, including how such processes develop and change in the brain and through time.
For More Information: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14514

Management and Operation of the Gemini Observatory

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 27, 2015
Expected Number of Awards: 1
Estimated Total Program Funding: $208,103,000
Eligibility For-profit organizations: U.S. commercial organizations, especially small businesses with strong capabilities in scientific or engineering research or education.; Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities; Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members.
CFDA Number: 47.049 -- Mathematical and Physical Sciences
Funding Opportunity Number: 14-594
Proposals are solicited to manage and operate the Gemini Observatory through a cooperative agreement with the National Science Foundation (NSF). The Gemini Observatory is an international collaboration currently consisting of the funding partners of the U.S., Canada,

Australia, Brazil, and Argentina, as well as host institutions in Chile and Hawai’i. The Gemini Partnership operates twin optical/infrared optimized 8 m diameter telescopes on the superb sites of Mauna Kea, Hawai'i and Cerro Pachón, Chile, providing large light-collecting areas, exquisite image quality, high infrared transparency (especially at Mauna Kea), agile and efficient scheduling queues, access to the entire sky, and well-developed infrastructures. Gemini North and Gemini South have carried out scientific operations since 2000 and 2001, respectively, addressing fundamental scientific questions with new observational and operational techniques. **For more information, go to**: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14594

Outstanding New Environmental Scientist (ONES) Award (R01)

Granting Agency: National Science Foundation
Current Closing Date for Applications: Feb 27, 2015
Estimated Total Program Funding: $3,000,000
Eligibility Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education; Private institutions of higher education; Nonprofits that do not have a 501(c)(3) status with the IRS, other than institutions of higher education; Public and State controlled institutions of higher education
CFDA Number: 93.113 -- Environmental Health
Funding Opportunity Number: RFA-ES-15-003
The Outstanding New Environmental Scientist (ONES) Award is intended to identify the most talented Early Stage Investigators (ESIs) who intend to make a long-term commitment to research in the Environmental Health Sciences and assist them in launching an innovative research program focused on the understanding of environmental exposure effects on peoples health. **For more information, go to:** http://grants.nih.gov/grants/guide/rfa-files/RFA-ES-15-003.htm

United States-Israel Collaboration in Computer Science

Granting Agency: National Science Foundation
Current Closing Date for Applications: Mar 16, 2015
Expected Number of Awards: 9
Estimated Total Program Funding: $400,000
Eligibility Unrestricted
CFDA Number: 47.070 -- Computer and Information Science and Engineering
Funding Opportunity Number: 15-510
The United States-Israel Collaboration in Computer Science (USICCS) program is a joint program of NSF and the United States - Israel Binational Science Foundation (BSF). The program supports research projects that develop new knowledge in the areas of theory of computing; algorithm design and analysis; design, verification, and evaluation of software

systems; and revolutionary computing models based on emerging scientific ideas.Through this program, NSF and BSF will jointly support collaborations among US-based researchers and Israel-based researchers. US-based researchers will receive funds from NSF to support travel to Israel to interact with their Israeli counterparts. Israel-based and US-based researchers will receive funds allowable under the BSF program described at http://www.bsf.org.il/. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15510

Genealogy of Life

Granting Agency: National Science Foundation
Current Closing Date for Applications: Mar 25, 2015
Expected Number of Awards: 6
Estimated Total Program Funding: $10,000,000
Eligibility Unrestricted
CFDA Number: 47.050 – Geosciences; 47.074 -- Biological Sciences
Funding Opportunity Number: 14-527
All of comparative biology depends on knowledge of the evolutionary relationships (phylogeny) of living and extinct organisms. In addition, understanding biodiversity and how it changes over time is only possible when Earth's diversity is organized into a phylogenetic framework. The goals of the Genealogy of Life (GoLife) program are to resolve the phylogenetic history of life and to integrate this genealogical architecture with underlying organismal data. The ultimate vision of this program is an open access, universal Genealogy of Life that will provide the comparative framework necessary for testing questions in systematics, evolutionary biology, ecology, and other fields. A further strategic integration of this genealogy of life with data layers from genomic, phenotypic, spatial, ecological and temporal data will produce a grand synthesis of biodiversity and evolutionary sciences. The resulting knowledge infrastructure will enable synthetic research on biological dynamics throughout the history of life on Earth, within current ecosystems, and for predictive modeling of the future evolution of life.Projects submitted to this program should emphasize increased efficiency in contributing to a complete Genealogy of Life and integration of various types of organismal data with phylogenies.This program also seeks to broadly train next generation, integrative phylogenetic biologists, creating the human resource infrastructure and workforce needed to tackle emerging research questions in comparative biology. Projects should train students for diverse careers by exposing them to the multidisciplinary areas of research within the proposal. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14527

Research Initiation Grants in Engineering Education

Granting Agency: National Science Foundation
Current Closing Date for Applications: Mar 26, 2015
Expected Number of Awards: 20
Estimated Total Program Funding: $150,000
Eligibility Proposals may only be submitted by the following: -Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and

having a campus located in the US, acting on behalf of their faculty members. Such organizations also are referred to as academic institutions. *PI Limit: The RIGEE program is designed to broaden participation of engineering faculty new to engineering education research. At least one (co)PI must be a member of an engineering department AND not have received engineering education funding through EEC in the last three years. Submissions from senior faculty and faculty who have just received tenure and are exploring alternative career paths are especially encouraged.
CFDA Number: 47.041 -- Engineering Grants
Funding Opportunity Number: 11-507
Engineering faculty possess both deep technical expertise in their engineering discipline and the primary responsibility for educating future engineers. As such, engineering faculty are in a unique position to help address critical challenges in engineering education. The Research Initiation Grants in Engineering Education (RIGEE) program enables engineering faculty who are renowned for teaching, mentoring, or leading educational reform efforts on their campus to initiate collaborations with colleagues in the learning and cognitive sciences to address difficult, boundary-spanning problems in how we educate engineers. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11507

Emerging Frontiers in Research and Innovation (EFRI)

Granting Agency: National Science Foundation
Current Closing Date for Applications: Mar 30, 2015
Expected Number of Awards: 8
Estimated Total Program Funding: $15,000,000
Eligibility Proposals: Proposals may only be submitted by the following: -Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions. *Who May Serve as PI: The lead Principal Investigator (PI) must be at the faculty level as determined by the submitting organization. A minimum of one PI and two co-PIs must participate.
CFDA Number: 12.800 -- Air Force Defense Research Sciences Program; 47.041 -- Engineering Grants; 47.049 -- Mathematical and Physical Sciences
Funding Opportunity Number: 15-502
The Directorate for Engineering at the National Science Foundation has established the Office of Emerging Frontiers in Research and Innovation (EFRI) to serve a critical role in focusing on important emerging areas in a timely manner. This solicitation is a funding opportunity for interdisciplinary teams of researchers to embark on rapidly advancing frontiers of fundamental engineering research. For this solicitation, we will consider proposals that aim to investigate emerging frontiers in the following research area: Two-Dimensional Atomic-layer Research and Engineering (2-DARE)This solicitation is coordinated with the Directorate for Mathematical & Physical Sciences within NSF. Additionally, interest within other Federal agencies, specifically Air Force Office of Scientific Research (AFOSR), may lead to an interagency effort. Submitted proposals may be shared with interested representatives from AFOSR.EFRI seeks proposals with transformative ideas that represent an opportunity for a significant shift in

fundamental engineering knowledge with a strong potential for long term impact on national needs or a grand challenge. The proposals must also meet the detailed requirements delineated in this solicitation. **For more information, go to**:
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15502

ROSES 2014: Topical Workshops, Symposia and Conferences

Granting Agency: NASA Headquarters
Current Closing Date for Applications: Mar 31, 2015
Eligibility Proposers must be affiliated with an institution at nspires.nasaprs.com/ and, in general, NASA provides funding only to US institutions. Organizations outside the U.S. that propose on the basis of a policy of no-exchange-of-funds; consult Appendix B Section (l) of the guidebook for proposers (http://www.hq.nasa.gov/office/procurement/nraguidebook/) for specific details. Some NRAs may be issued jointly with a non-U.S. organization, e.g., those concerning guest observing programs for jointly sponsored space science programs, that will contain additional special guidelines for non-U.S. participants. Also ref. Sections 2.3.10(c)(vii) of the guidebook for proposers for special instructions for proposals from non-U.S. organizations that involve U.S. personnel for whom NASA support is requested.
CFDA Number: 43.001 -- Science
Funding Opportunity Number: NNH14ZDA001N-TWSC
This ROSES-2014 NRA (NNH14ZDA001N) solicits basic and applied research in support of NASA's Science Mission Directorate (SMD). This NRA covers all aspects of basic and applied supporting research and technology in space and Earth sciences, including, but not limited to: theory, modeling, and analysis of SMD science data; aircraft, scientific balloon, sounding rocket, International Space Station, CubeSat, and suborbital reusable launch vehicle investigations; development of experiment techniques suitable for future SMD space missions; development of concepts for future SMD space missions; development of advanced technologies relevant to SMD missions; development of techniques for and the laboratory analysis of both extraterrestrial samples returned by spacecraft, as well as terrestrial samples that support or otherwise help verify observations from SMD Earth system science missions; determination of atomic and composition parameters needed to analyze space data, as well as returned samples from the Earth or space; Earth surface observations and field campaigns that support SMD science missions; development of integrated Earth system models; development of systems for applying Earth science research data to societal needs; and development of applied information systems applicable to SMD objectives and data. **For more information, go to:**
http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId=%7B5924CEB3-4EB7-FEF1-C85B-DD5745C1331C%7D&path=open

ROSES 2014: Fellowships for Early Career Researchers

Granting Agency: NASA Headquarters
Current Closing Date for Applications: Mar 31, 2015

Eligibility Proposers must be affiliated with an institution at nspires.nasaprs.com/ and, in general, NASA provides funding only to US institutions. Organizations outside the U.S. that propose on the basis of a policy of no-exchange-of-funds; consult Appendix B Section (l) of the guidebook for proposers (http://www.hq.nasa.gov/office/procurement/nraguidebook/) for specific details. Some NRAs may be issued jointly with a non-U.S. organization, e.g., those concerning guest observing programs for jointly sponsored space science programs, that will contain additional special guidelines for non-U.S. participants. Also ref. Sections 2.3.10(c)(vii) of the guidebook for proposers for special instructions for proposals from non-U.S. organizations that involve U.S. personnel for whom NASA support is requested.
CFDA Number: 43.001 -- Science
Funding Opportunity Number: NNH14ZDA001N-ECF
This ROSES-2014 NRA (NNH14ZDA001N) solicits basic and applied research in support of NASA's Science Mission Directorate (SMD). This NRA covers all aspects of basic and applied supporting research and technology in space and Earth sciences, including, but not limited to: theory, modeling, and analysis of SMD science data; aircraft, scientific balloon, sounding rocket, International Space Station, CubeSat, and suborbital reusable launch vehicle investigations; development of experiment techniques suitable for future SMD space missions; development of concepts for future SMD space missions; development of advanced technologies relevant to SMD missions; development of techniques for and the laboratory analysis of both extraterrestrial samples returned by spacecraft, as well as terrestrial samples that support or otherwise help verify observations from SMD Earth system science missions; determination of atomic and composition parameters needed to analyze space data, as well as returned samples from the Earth or space; Earth surface observations and field campaigns that support SMD science missions; development of integrated Earth system models; development of systems for applying Earth science research data to societal needs; and development of applied information systems applicable to SMD objectives and data. **For more information, go to:** http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId=%7B5924CEB3-4EB7-FEF1-C85B-DD5745C1331C%7D&path=open

ROSES 2014: Rapid Response and Novel Research in Earth Science

Granting Agency: NASA Headquarters
Current Closing Date for Applications: Mar 31, 2015
Eligibility Proposers must be affiliated with an institution at nspires.nasaprs.com/ and, in general, NASA provides funding only to US institutions. Organizations outside the U.S. that propose on the basis of a policy of no-exchange-of-funds; consult Appendix B Section (l) of the guidebook for proposers (http://www.hq.nasa.gov/office/procurement/nraguidebook/) for specific details. Some NRAs may be issued jointly with a non-U.S. organization, e.g., those concerning guest observing programs for jointly sponsored space science programs, that will contain additional special guidelines for non-U.S. participants. Also ref. Sections 2.3.10(c)(vii) of the guidebook for proposers for special instructions for proposals from non-U.S. organizations that involve U.S. personnel for whom NASA support is requested.
CFDA Number: 43.001 -- Science
Funding Opportunity Number: NNH14ZDA001N-RRNES

This ROSES-2014 NRA (NNH14ZDA001N) solicits basic and applied research in support of NASA's Science Mission Directorate (SMD). This NRA covers all aspects of basic and applied supporting research and technology in space and Earth sciences, including, but not limited to: theory, modeling, and analysis of SMD science data; aircraft, scientific balloon, sounding rocket, International Space Station, CubeSat, and suborbital reusable launch vehicle investigations; development of experiment techniques suitable for future SMD space missions; development of concepts for future SMD space missions; development of advanced technologies relevant to SMD missions; development of techniques for and the laboratory analysis of both extraterrestrial samples returned by spacecraft, as well as terrestrial samples that support or otherwise help verify observations from SMD Earth system science missions; determination of atomic and composition parameters needed to analyze space data, as well as returned samples from the Earth or space; Earth surface observations and field campaigns that support SMD science missions; development of integrated Earth system models; development of systems for applying Earth science research data to societal needs; and development of applied information systems applicable to SMD objectives and data. **For more information, go to:** http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId=%7B5924CEB3-4EB7-FEF1-C85B-DD5745C1331C%7D&path=open